

W. F. PURCELL

A
TREATISE
ON
GONORRHOEA VIRULENTA,
AND
LUES VENEREA.

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TREATISE

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GONORRHŒA VIRULENTA,

AND

LUES VENEREA.

BY

BENJAMIN BELL,

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THE SECOND EDITION

DESIGNED AND ENGRAVED

VOL. I

ALPHABETICALLY

AND THE ALPHABETICALLY

OF THE ALPHABETICALLY

NEWLY REVISIT, LONDON

UNIVERSITY

TO
Doct^r WILLIAM SANDERS,
Senior PHYSICIAN to GUY'S
HOSPITAL,

Fellow of the ROYAL COLLEGE of
PHYSICIANS, London,

And of the ROYAL SOCIETY of Edinburgh,

These VOLUMES are respectfully dedica-
ted, as a small testimony of regard, and
of public acknowledgment, for the ad-
vantages which have been derived from
his various exertions to promote the ex-
tension and general utility of Medical
Science, by

His obedient,

And very humble Servant,

BENJⁿ. BELL.

EDINBURGH, }
2d Jan. 1797. }

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TO

DOCTOR WILLIAM SANDERS

Senior Physician to Guy's

HOSPITAL

Fellow of the Royal College of

Physicians, &c.

and of the Royal Society of Edinburgh

I have the honor to acknowledge the receipt of your letter of the 14th inst. in relation to the case of the gentleman who has been referred to you. I am sorry to hear that the tumor has increased in size, and that the general health is suffering. I have no doubt that the tumor is of a malignant nature, and that the only chance of cure is by its removal. I have no objection to your performing the operation, and I am sure that you will do it with the greatest skill and success.

Yours obediently,

Wm. Sanders

BENJ. BELL

Witnessed by
J. B. Bell

P R E F A C E.

AS many of the symptoms of Gonorrhœa and Lues Venerea become frequent objects of the surgeon's attention, I at one time meant to have introduced a treatise on these diseases in the System of Surgery, published some years ago, but I was prevented from doing so, by different publications upon the same subject being announced about that period.

As some of these works have been very favourably received, it may be imagined, that further writings upon the subject to which they relate can scarcely at present be required. It must indeed be admitted, that many valuable publications have come forth within these few years upon

this branch of the profession; particularly one by Mr John Hunter of London, intituled, a Treatise on the Venereal Disease; and another, intituled, Practical Observations on Venereal Complaints, by Dr Swediaur. But although much information may be obtained from both of these works, as well as from some other late publications, there is still much left for others to explain. Such is the effect of experience and observation, that farther advantages daily accrue from the labours of individuals in the treatment of this as well as of almost every other disease; and as this, I hope, will in some degree appear from the present publication, so I shall still expect to find that the future endeavours of others will prove yet more successful.

AMONG other points which I have more particularly attempted to elucidate, the treatment of Gonorrhœa by injections, and the quantity of mercury to be exhibited in Lues Venerea, are, perhaps the most

most important ; and I flatter myself, that I have given views concerning them, which, in practice, will be found to merit attention. The cure of Gonorrhœa by injections is no doubt practised by many ; but while in a great proportion of cases it proves successful, in others it fails entirely : The cause of this, so far as I know, has never hitherto been explained. Whether I may have conveyed an adequate idea of my opinion upon this point I cannot positively say ; but the observations upon which it is founded are such, that all who pay attention to the subject may be enabled readily to ascertain such cases as will yield to injections, as well as those in which no advantage is derived from them.

THE opinion which I have ventured to support, of the difference between the matter of Gonorrhœa, and that of Lues Venerea, will no doubt be censured by many. They ought, however, to recollect,

lest, in matters of opinion, which cannot be proved by demonstration, that some uncertainty must always take place; and before censuring with severity the opinions which others may suggest, they should consider whether their own may not be equally liable to objection. To me it appears that the reasons which I have adduced in support of my opinion are very conclusive, but I shall make full acknowledgment of my error, if sufficient reasons shall ever be given to show that it is ill founded. In the mean time, it will be perceived, that the theory which I have adopted does not lead to any deviation from the practice which now generally prevails upon this point, while it serves to explain, more clearly than the opinion which has commonly prevailed, several of the phenomena of the two diseases, as well as the causes of different remedies being necessary for each of them.

PREFACE.

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I do not expect that practitioners of experience and observation will receive much information from this publication, but I am hopeful that it will prove useful to beginners ; for it has been equally my desire to exhibit a correct view of the different symptoms of which I treat, and to point out the method of cure in a manner that will be clear and intelligible. Where theory is ever admitted, it is chiefly with a view to explain, upon rational principles, such points as the ingenuity of some speculative writers have tended to render intricate.

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A
TREATISE
ON
GONORRHŒA VIRULENTA,
AND
LUES VENEREA.

CHAPTER I.

Consideration of the Question, Whether Gonorrhœa and Lues Venerea originate from the same Contagion?

AN opinion has generally prevailed among practitioners, that Gonorrhœa Virulenta and Lues Venerea are of the same nature; that they originate from the same contagion; and are only distinguished by the circumstance of Gonorrhœa

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being a local disease of the urethra, while the other is a general affection of the system. But, as there is cause to imagine that the two diseases arise from different specific contagions, and as the conduct of the cure must be influenced by one or other of these opinions being established, it becomes a matter of importance to institute an inquiry into this part of our subject.

Both diseases are contracted in a similar way; both, in the first instance, affect the genital organs; and they occasionally appear at the same time in the same patient: hence it has been conceived that they have a common origin, and one method of cure has been supposed applicable to either.

The refusal of some patients to submit to the distress and inconveniency that frequently ensues from a protracted mercurial course, and who nevertheless recovered from the usual symptoms of *Gonorrhœa*, first suggested a doubt of the two diseases being produced by the same contagion. It is well known, that *Lues Venerea* can be

be certainly cured by mercury only; and the opinion respecting the existence of a specific contagion in Gonorrhœa, arising from this obvious and marked difference in the method of cure, appears to be fixed and established by the following facts: The symptoms and consequences of Gonorrhœa are perfectly different from those which take place in Lues Venerea. Both diseases have appeared at different periods in the same countries; and, in some instances, they have remained distinct and uncombined for a great length of time.

That the symptoms of the two diseases are different, is universally known. A particular detail of such as are peculiar to each, will be given in the ensuing chapters. At present, it is only necessary to observe, that Gonorrhœa consists in a discharge of puriform matter from the urethra; which, even by those who support the contrary opinion, is now admitted to be, in almost every instance, a local affection, and that it very rarely contaminates the general habit of body: while

Lues Venerea is a disease of the constitution, arising from the absorption of venereal virus from any part of the surface of the body, but most frequently from the genitals; from which ensue buboes, ulcers in various parts, particularly in the nose and throat, pains and swellings in the bones, with a variety of other symptoms which it is not at present necessary to mention.

The first appearance of Lues Venerea is, for the most part, in the form of a chancre or small ulcer, in some part of the penis. It is universally admitted, that even the slightest degree of chancre is apt to produce pox, or a general affection of the system; insomuch, that no practitioner of experience will trust the cure of this symptom to local remedies. If the sore be left to itself, it almost always becomes worse. The matter which it affords is taken up by the absorbents; and buboes, with the other symptoms that I have enumerated, very certainly ensue. These are almost the universal consequences

ces of sores produced by the venereal virus; but they frequently occur where the skin remains entire; that is, absorption of the venereal poison often takes place where no vestige of ulceration is perceived: This, indeed, is denied by many; but I have met with it in various instances, and it will be admitted by every practitioner of experience. Now this being established, in the application of the venereal virus to every other part of the body, if the matter of Gonorrhœa is of the same nature, why does it not, in almost every case of clap, enter the system, and produce pox? So far as we know, the urethra is as plentifully supplied with absorbents as other parts of the body; the same kind of matter, when applied to them here, ought therefore to be productive of similar effects: and hence Lues Venerea ought, perhaps in every instance, to be the consequence of Gonorrhœa, were the matter by which the two diseases are produced the same.

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Because the nature of this virus will not allow ulceration - when it does then it is the Pox.

Because there is no chancre or ulceration in the same venereal matter on the surface as in the gland which is not the case.

Because the nature of this virus will not allow ulceration - when it does then it is the Pox.

As this is a strong argument in favour of the two diseases arising from different kinds of contagion, much ingenuity has been exerted by those who support the contrary opinion, in endeavouring to account for it.

In the first place, it has been said, that *Gonorrhœa* sometimes terminates in pox, and, therefore, that this of itself is a sufficient proof of the two diseases being the same.

Were it certain that this ever happened, no further evidence would be required, as a few well-marked instances would be conclusive; but every unprejudiced practitioner will admit, that no sufficient proofs of it have ever occurred.

In order to support this opinion, data must be received, which we know to be inadmissible. We must admit, that a person with chancres only, communicates to another, not only every symptom of pox, but of *Gonorrhœa*, and that another with *Gonorrhœa* only, gives to all with whom he may have connection, chancres
with

with their various consequences. This ought, indeed, to be a very common occurrence; infomuch, that every practitioner should be able to decide upon it with certainty, if this opinion was well founded: Instead of which, it will be admitted by all, that the one disease being produced by the other, is, even in appearance, a very rare occurrence. I have paid much attention to the point in question; and, in almost every instance, a few cases only excepted, and where the most particular inquiries even were made, it has happened, that a person infected with Gonorrhæa has received it from another evidently labouring under that disease, and that chancres have very universally been communicated by such as were distressed with chancres only.

This, I am convinced, will be commonly found to be clearly the case; so that a few instances, bearing some appearances of the contrary, are much more readily explained on the idea of the two diseases being produced by different kinds

of contagion; and this may also be said of the few solitary cases that may be met with, of chancre being supposed to terminate in *Gonorrhœa*, and *Gonorrhœa* in chancre, and other symptoms of pox. We can more easily conceive that the same person should, in some instances, receive, and therefore be able to communicate, both kinds of contagion, than that the incident we are considering should be so seldom met with, were the opinion well founded, of the two diseases being originally of the same nature.

However ill founded an established opinion may be, if it has received the sanction of being generally adopted, we know how difficult it is to overturn it. Few enter so minutely into the consideration of such points as to be able to decide upon them; and of those who do, a very small proportion ever take the trouble of engaging in such discussions as are necessary for the conviction of others. This is perhaps the chief cause of the point in question having remained so long in obscurity,

security, as well as of the explanation hitherto usually given, of various circumstances in Gonorrhœa and *Lues Venerea* having been uniformly made to support it. It will also serve to account for circumstances being held forth as matter of fact, which, on inquiry, are perceived to be ill founded; for, when once an opinion is admitted, we are apt to give such an explanation of whatever may seem to relate to it, as can in any way tend to support it.

Thus, although few in the present age will assert that Gonorrhœa often terminates in *Lues Venerea*, yet many allege that it is apt to do so whenever it is improperly treated. Whatever puts a sudden stop to a copious discharge from the urethra, is by many supposed to produce *Lues Venerea*. Hence all who condemn the use of injections in Gonorrhœa, affirm, that they often convert a simple clap into a pox, by throwing into the blood what otherwise would have been carried off. This, however, is not supported by experience. A stimulating injection will no doubt excite pain

and

and inflammation in the urethra; and this, in some instances, will be productive of swelled testes, and perhaps of sympathetic swellings in the glands of the groin; but I have not known a single instance of pox being induced in this manner: and as I have long been in the daily use of injections, it must often have happened, if the idea that I have stated were well founded. Till of late, indeed, a patient who was so unfortunate as to have a clap suddenly stopped, was so certainly considered as poxed, that he was immediately put under a complete course of mercury, by which he was made to undergo a very unnecessary and distressful confinement.

Although this practice, however, is now very commonly exploded, yet there are some who still adhere to it. I was called, in April 1784, to visit a gentleman, who, in a *Gonorrhœa* attended with a good deal of inflammation, had been so foolish as to live freely, and to ride much on horse-back. This, with the unguarded use of a very stimulating injection, put a sudden stop

stop to the discharge; and at the same time it excited a very considerable degree of pain and inflammation, along all the posterior part of the urethra towards the prostate gland and neck of the bladder, attended with a painful and frequent desire to pass water.

On the idea of these being symptoms of pox, he was immediately put under a course of mercury; and, when I first saw him, he had been using it for the space of six weeks. The surgeon in attendance acknowledged that no advantage had been derived from the mercury; and the patient himself said that his distress was daily increasing. They were both, therefore, easily persuaded to lay the mercury aside; and, by the repeated application of leeches to the perineum, of fomentations, and opiates, to allay the pain, the inflammation soon began to subside; and, in a short time, he was perfectly well.

In December 1788, a young man called upon me, with a painful hard swelling in his groin, of an oblong form, nearly an
inch

inch in diameter, and reaching from the ring in the external oblique muscle down to the top of the testis. It appeared suddenly, about four months before, and seemed to be the consequence of a clap being too hastily stopped. He was at first attacked with severe pain at the neck of the bladder, which stretched to the groin, and down to the testis of the same side. This, together with a constant and painful inclination to void urine, rendered his life miserable. Nor was his distress in any degree lessened by a course of mercury which he was immediately put under. On the contrary, the swelling, which at first was not thicker than a common quill, was now very considerable. My opinion of it was, that at first it arose from inflammation of the vas deferens, which by degrees had spread to the rest of the spermatic cord; but without affecting either the testis or epididemis. As a large quantity of mercury had been taken, and as, instead of proving useful, it had rather appeared to do harm, the surgeon whom he employed

ed was easily persuaded to trust the cure to other remedies. Local bloodletting with leeches was frequently repeated, both in the perineum and groin. The parts were regularly fomented with a solution of saccharum saturni. His bowels were kept easy with gentle laxatives, and he was put upon a mild diet of milk and vegetables. In a few days the pain abated, and the tumour gradually lessened, till at last, after five or six weeks had elapsed, it was entirely gone.

In the course of last winter, I attended two different patients, with alarming symptoms about the neck of the bladder, evidently induced by the improper management of Gonorrhœa. The parts in both were not merely pained, but considerably swelled, accompanied with nearly a total suppression of urine. Although in both the discharge from the urethra had stopped suddenly, I did not advise mercury. The patients being both plethoric, were plentifully blooded, first at the arm, and afterwards repeatedly with leeches in the

the perineum. This, with fomentations, and opiates to allay the violence of the pain, assisted by a cooling regimen and gentle laxatives, very soon completed the cures.

These instances are given out of a great number that I could adduce, merely to shew, that the symptoms which supervene on the sudden stoppage of a clap, are local, and not connected with any disease of the constitution, which they necessarily would be, were they of the same nature with Lues Venerea.

It will perhaps be said, that although this may have happened in a few cases, yet that in others there has been cause to suspect, that Lues Venerea has been the consequence of a clap disappearing in this manner. In answer to this, it is sufficient for me to assert, that this is at least a rare occurrence, as I think I am entitled to do, from my never having met with it. Some have supposed, that a sudden check being given to the discharge of a clap, must necessarily throw the matter into the blood,
and

and that pox must therefore ensue from it. Were the matter of the two diseases the same, this would often happen; so that, when we can show that it seldom happens even in appearance, we are entitled, from this argument alone, to conclude, that they are produced by two different kinds of contagion; and, where pox has appeared at the sudden termination of Gonorrhœa, that the two kinds of infection had either been communicated together; or, what I have often met with, the patient may have received the pocky contagion by communication with a diseased woman at the very time he laboured under Gonorrhœa. I have already remarked, that *Lues Venerea* is frequently produced by absorption while the skin remains entire, and where no chancre or excoriation is perceptible. There is therefore much cause to imagine, that in long continued cases of Gonorrhœa, many may be infected with *Lues Venerea* by communication with others labouring under it; and, as this may happen without any external

ternal mark of disease, it is not surprising, that, from this circumstance alone, some fallacy should arise.

Those who imagine that the matter of the two diseases is the same, admit that Gonorrhœa very seldom terminates in pox*. And they attempt to account for this

* This is even granted by one, who, in every other point, keenly supports the opposite doctrine. In speaking of Gonorrhœa and Chancre not terminating so frequently as might be expected in the production of each other, he says, "Although it does not often happen, yet it sometimes does, *at least there is great reason to believe so*. I have seen cases where a Gonorrhœa came on, and in a few days after in some, in others as many weeks, a chancre has appeared; and I have also seen cases where a chancre has come first, and in the course of its cure a running and pain in making water have succeeded." V. Treatise on the Venereal Disease, by John Hunter, page 16.

This is what every practitioner has seen; but, by admitting so clearly that it is a rare occurrence, Mr Hunter tends rather to strengthen the contrary opinion: for, were the two diseases produced by the same kind of matter, the one would clearly and necessarily *often* terminate in the other. In the few instances of which Mr Hunter, in the course of extensive practice, has met with, there is

more

this, that is, for the two diseases not being produced more frequently by the application of the same matter, by saying, that this depends upon the difference of parts to which the matter is applied.

They divide the different surfaces of the body chiefly into two kinds, what they term *secreting surfaces* and *non-secreting surfaces*. By the first they mean all the passages for extraneous matter, including also the ducts of glands, such as the mouth, nose, eyes, ears, and urethra; and by *non-secreting surfaces*, the external skin in general. To which they add a third kind of surface leading from the one to the other, as the glans penis, prepuce of the mouth, the inside of the lips, and the female pudendum: which surfaces, par-

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more cause to imagine, either that the two diseases were communicated at once, or that the one was given while the patient laboured under the other, than that nature should deviate so much from her ordinary course as to produce them in a few instances so very differently from what obviously happens in the course of general observation.

taking of the properties of each of the others, but in a less degree, are capable, as they suppose, of being affected in both ways, sometimes by being excited to secretion, and at other times to ulceration*.

Upon this, their theory, or opinion of the point in question, is attempted to be established: When the contagion, either of *Gonorrhœa* or pox, and which they consider to be the same, is applied to any part of the external skin, particularly to the glans penis, where the skin is thin, chancre or ulceration, they observe, will most readily ensue, as these are *not secreting surfaces*; while the same kind of matter, applied to the urethra must necessarily, they observe, excite *Gonorrhœa*, from this being a secreting surface, and therefore not so easily affected with ulceration as with irritation; by which an increased discharge, attended with some change in the mucus of the part, must accordingly be produced.

This

* Vide John Hunter on the Venereal Disease,

This idea, however, is more ingenious than solid. It might answer the purpose of giving a specious appearance to an ill-founded opinion, but it will not stand the test of inquiry.

In the first place, on the supposition of the matter of Gonorrhœa and Lues Venerea being the same, pox ought to be more frequently met with than claps, from the greater ease with which the matter of infection must, in every instance, be applied to those parts on which it can produce chancres than to the urethra, where, instead of chancre or ulceration, it almost always excites Gonorrhœa. It is difficult indeed to conceive how the matter of infection finds access to the urethra; while, on the contrary, all the external parts of the penis, particularly the glans, must be easily and universally exposed to it: and yet Gonorrhœa is a much more frequent disease than pox. Cases of Gonorrhœa are in proportion to those of Chancre and Pox, so far as my observation goes, of about three to one; while it is obvious, that the

very reverse should happen, if the two diseases were produced by the same matter*.

Again, were this the case, should we not find Gonorrhœa, in a great proportion of cases, terminating in Pox, and Chancre in Gonorrhœa? for every one knows, that in Gonorrhœa the matter is at all times passing from the urethra over the glans and prepuce, and in Chancre from the glans into the entrance of the urethra. It happens indeed, in a few instances: Mr Hunter, we see, has met with some cases of it, that the one disease supervenes upon the other: but we have also seen that these are rare occurrences; and, where they have not been communicated by subsequent connection with an infected person, that the two diseases have probably

* Mr Hunter supposes, that the proportion the cases of Gonorrhœa bear to those of Chancre, is as four or five to one. Vide Treatise on the Venereal Disease, p. 217. This is surely a weighty argument against the opinion he endeavours to support, of Gonorrhœa and Chancre proceeding from the same contagion.

probably been given at one and the same time. It is no argument against this suggestion, to say, that instances sometimes occur, of Gonorrhœa appearing during the continuance of chancres of several weeks duration, and *vice versa*; for every practitioner must have met with instances of both diseases having appeared at the distance of two or three months from any exposure to infection.

I have at this moment a gentleman under cure, for a deep foul chancre, altogether within the urethra. It was of several weeks duration before I saw him, and yet no Gonorrhœa took place. He is now getting well, by a complete course of mercury, and repeated application of caustic.

Similar instances have probably occurred to every practitioner: So lately as the month of April last, I was called to a gentleman with a painful chancre on each side of the urethra. The sore extended about the eighth part of an inch up the passage; and the parts being much inflamed, I hesitated to apply caustic. This rendered the cure

tedious, but still no Gonorrhœa took place. At last, after he had taken a considerable quantity of mercury, and when the chancres were looking clean, and in a healing state, he was seized with all the symptoms of a severe clap; with heat in making water, chordee, and a plentiful discharge of thin green matter. This, however, bore all the appearance of a recent infection. I at once said so to my patient, and he candidly acknowledged that he had imprudently exposed himself, by having connection with a girl of the town, three or four days previous to the accession of these symptoms.

We may also remark, that the discharge from Gonorrhœa frequently becomes so acrid as to excoriate the glans and preputium, and even to excite a very plentiful formation of matter; but every one knows that this is materially different from chancre. It is altogether different in appearance, and so materially different in its effects, that no practitioner of experience will trust the cure of chancres to any thing

thing but mercury, while, in the other, mercury, I imagine, is very seldom employed. However extensive the excoriations may be, they are easily removed by local remedies; and I have never known an instance of pox succeeding to this kind of treatment. Nay, I have met with various instances of these excoriations, in which mercury had been freely given, without any advantage, and in which a cure was afterwards accomplished by the use of an astringent wash.

About eighteen months ago, a gentleman came to town, with an extensive excoriation over all the glans and preputium, attended with a large discharge of thin offensive matter. The quantity of matter indeed was so considerable, that at first sight it seemed to be the discharge of a recent inveterate Gonorrhœa; but, on farther examination, it appeared to proceed entirely from the glans and prepuce, the clap by which it was produced being entirely gone.

He had taken mercury for the space of six weeks; and the parts had been regularly bathed in milk and water, but with no advantage. The discharge continued as plentiful as ever, and the preputium was beginning to acquire some degree of thickness, and to be difficult to retract. In the space of a week he was completely cured, merely by bathing the parts from time to time with brandy and water, and applying, during the night, a poultice strongly impregnated with *saccharum saturni*.

This, as well as a variety of similar cases, which, were it necessary, I might enumerate, clearly evince, not only that the matter of *Gonorrhœa*, when confined to the urethra, does not terminate in pox, but that it proves equally inoffensive to the constitution, even where it is so sharp and acrid as to excoriate the glans and contiguous parts, from which a very marked difference, I may observe, is obvious between the matter of the two diseases. In pox, even the slightest fore rarely fails to throw

throw matter into the system, while the most extensive excoriations proceeding from Gonorrhœa are so seldom found to injure the constitution, that I have never met with an instance of their doing so.

By those who are still induced to support the opposite doctrine, it is said, that the matter of Gonorrhœa would more frequently terminate in pox, were it not for the mucus of the urethra with which it is blended, and by which they suppose it to be rendered not only milder in its nature, but not so apt to be taken up by the absorbents. This, however, is merely ideal; and no proof can be advanced in support of it. Besides, the force of the argument is entirely done away, when we see, as I have observed above, that even where the matter of Gonorrhœa is more acrimonious than we commonly find it to be even in Chancre, so as in some instances to produce very extensive excoriations, still no injury to the constitution ensues from it.

Nay, we see, even in such diseases as are found to proceed from what is termed

a translocation of the matter of Gonorrhœa to other parts of the body, and which we suppose to happen through the medium of the circulation, that still no affection of the constitution proceeds from them. This is particularly the case in those instances of ophthalmia which sometimes proceed from Gonorrhœa, and in which a considerable discharge takes place, of a puriform matter from the eye-lids, very similar to the matter of a recent clap. I have also met with instances of patients labouring under Gonorrhœa being seized with a similar discharge from the membrane of the nose; but in none of these have I ever known Lues Venerea ensue. Many examples might be adduced of each of these; but the three following will be sufficient.

In the year 1786, a young man applied to me, with a very troublesome painful disease in both eyes. The eye-balls were not much inflamed outwardly; but as he experienced an intense degree of pain from the admission of light, I was led to believe that the retina, or other deep-seated parts
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of the eye, were in a state of inflammation; and the membrane of the eye-lids was not only inflamed, but a constant and copious discharge took place from them, of a greenish yellow matter, bearing much the appearance of the matter of a recent clap.

The account which I received from him was this: That he had for eight or ten days laboured under Gonorrhœa, the symptoms of which, however, were not more severe than usual; when, after being heated with drinking port wine, the discharge from the urethra, which had previously been copious, disappeared almost entirely. His eyes, almost immediately thereafter, became painful; and, in less than twenty-four hours, the discharge of matter took place from the eye-lids.

The disease was at first treated with blisters, slight evacuations of blood, and the usual applications of ointments and collyria. These not proving successful, a course of mercury was prescribed: but, although different attempts were made with

with it, mischief always ensued from it. It did not lessen the discharge, while it obviously increased the inflammation, and rendered the eyes more irritable. I therefore advised this remedy to be laid aside. A quantity of blood was taken from the temporal artery of one side; such vessels as were turgid upon the eye-balls were divided; scarifications were made in the inflamed parts of the eye-lids; poultices were applied over the eyes, in which opium and saccharum saturni were dissolved; and gentle laxatives were given. By these means the pain soon abated; the inflammation and discharge of matter lessened; and, in the course of a fortnight, no symptom of the disease remained, but a degree of irritability on exposure to much light, with which both eyes continued to be distressed for five or six months thereafter.

In the course of the following year, on being attacked with Gonorrhœa, but of a more violent nature than the former, he was again seized, after exposure to much cold,

cold, and riding on horseback, with a similar affection of his eyes. In this instance, too, bloodletting, and the other remedies formerly prescribed, again proved successful; and he has not since that period had any return of the disease.

About two years ago, I was taken to a patient, who, during confinement from a swelled testis induced by Gonorrhœa, was suddenly seized with a profuse discharge of matter from one of his nostrils, very similar to the running of a clap. The lining membrane of the nose was tender, and somewhat inflamed, but not painful; and I was informed that the discharge from the urethra lessened before the testis became inflamed, and, on this taking place from the nose, that it disappeared entirely. This suggested the propriety of attempting to excite a return of the discharge by the urethra; but no advantage being derived from it, I advised the disease in the nose to be treated with injections similar to what we use in cases of clap. An astringent solution was thrown up, occasionally with a syringe, and at
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other times by inserting a bit of sponge immersed in it up the nostril; and in the course of a few days the running ceased entirely.

Since that period, the same patient has been twice affected in a similar manner, and the same kind of treatment proved equally successful. No mercury was given, and no symptom of pox has ever appeared.

In a few weeks after the recovery of this patient, I was desired to see a friend of his, who for several years had been distressed with a similar discharge from both nostrils. The discharge took place during the continuance of a clap; and although it had frequently become less, it never disappeared entirely. No ulceration appeared on the membrane of the nostrils, but it was of a deep red colour, and tender over its whole extent. Various remedies had been employed; and at last, after the discharge had continued for upwards of three years, although no other symptom appeared, he was advised to undergo a course of mercury.

mercury. This was done in the most attentive manner; but no advantage ensued from it.

In this situation, I expected that the same plan of treatment which proved successful in the preceding case, and which had also done so in others, would likewise answer here. In this, however, I was disappointed; for, although every variety of injection was used that I ever employed in Gonorrhœa, yet no material advantage ensued from them. The running was sometimes indeed lessened, but it always returned with equal severity as before; and although it has of late, even when no remedies have been employed, become considerably less, it still continues in such quantities as to prove highly distressful. No other symptom of the disease, however, has ever occurred.

As a farther proof of the difference of the contagion of Syphilis and Gonorrhœa, it may be remarked, that no stage of pox has ever been known to induce Gonorrhœa, which surely would occasionally happen,

happen, were the two diseases of the same nature. We may also remark, that, in numberless instances, people have been poxed by the matter of Syphilis being by accident applied to a cut or a scratch, as often happens with surgeons in the dressing of chancres and buboes; but no one ever heard of a pox being got in this manner from the matter of Gonorrhœa. It has indeed been said, that chancres may be produced by insinuating the matter of Gonorrhœa beneath the skin. But experiments of this kind are productive of such anxiety and distress, that they never have been, nor ever probably will be, repeated so frequently as the nature of the subject would require. Nothing, therefore, can be admitted from this argument; for, in order to avoid fallacy, and to give support to the opinion, these experiments would not only require to be conducted with accuracy, but to be numerous, and repeated on a variety of patients under every possible variety of circumstances; whereas we have heard of only a single experiment
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or two being made by any individual; and even these seem to have been made under the management of such as were strongly and obviously biaſſed in favour of one ſide of the queſtion.

In oppoſition to theſe, too, I may mention, that, induced by ſome late publications, two young gentlemen of this place have made ſome experiments upon themſelves, with a view to aſcertain the point in diſpute; but the reſult was materially different from what is ſaid to have happened in the experiments to which I allude. By the introduction of the matter of chancres, as well as of buboes, into the urethra, ſome pain and irritation were excited, but no Gonorrhœa enſued; and, by fretting the ſkin of the prepuce and glans with a lancet, and rubbing the parts with the matter of Gonorrhœa, ſlight ſores were produced; but they did not aſſume the appearance of chancres, and they healed eaſily without the uſe of mercury. —For the reaſons, however, which I have given, we cannot place much dependence

upon these or any other experiments that have as yet been made upon the subject; we must trust therefore to experience and observation in the ordinary course of practice for means to ascertain it.

The other fact on which the doctrine that I wish to establish rests, is, that *Gonorrhœa* and *Syphilis* have appeared at different times in the same countries, and in some instances have remained distinct and uncombined for a great length of time.

If the two diseases were of the same nature, and produced by the same contagion, they would have appeared nearly at the same time in every country to which the infection was carried. This does not appear, however, from the history of the disease, to have been the case. From the earlier writers upon the venereal disease, it is evident, that the *Lues Venerea* was known in Europe at least forty years before the *Gonorrhœa Virulenta*. Doctor Astruc, whose accuracy and minute attention to the subject has not been equalled
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by any, asserts, that in his time Gonorrhœa had not been long known in China, although we know that the *Lues Venerea* had long prevailed in that country : and it would appear, notwithstanding of all that has been said to the contrary, that the *Lues Venerea* was imported to the island of Otaheite a considerable time before Gonorrhœa. It seems to have been carried to that and other islands in the South Seas by the very first European navigators who touched there, and to have remained distinct, without being connected with Gonorrhœa, for a very considerable time; for, when Captain Cook visited these islands in his second voyage, I have authority for saying, that Gonorrhœa had not then appeared in them.

These historical facts all tend to prove, that where only one of these diseases has been imported to a particular district, it has always remained distinct, without producing the other; and which we cannot suppose would have happened, if both were formed by the same contagion. And, in

addition to these, I may add another, not less remarkable, the truth of which may be ascertained by all who incline to inquire concerning it, as the scene of it lies in our own country.

In various parts of Scotland, particularly in some parts of the Highlands; in Galloway, and in Dumfriesshire; the common people have, for a great length of time, been afflicted with the *Lues Venerea*, under the denomination, in some places of Yaws, in others of Sibbens; and which, from those who labour under it having no communication with those infected with *Gonorrhœa*, has still retained its original, unmixed form, without a single instance, so far as I know, of *Gonorrhœa* having been ever produced by it*. There is evidence, in some of these

* This I conceive to have happened from the disease in these districts prevailing almost entirely among poor country people, whose manners do not expose them to the hazard of being infected with *Gonorrhœa*. None, however, can escape the Sibbens who are much in company with those who labour under it; and so much are they convinced of its being the same disease with *Lues Venerea*,

these districts, of this disease having prevailed among them for upwards of seventy years: Nay, in some of them, it is said, from tradition, to have been left there by the soldiers of Oliver Cromwell, and to have been given, since that period, by one generation to another; and, although I have had opportunities of seeing many hundred people labouring under it, with ulcers in the throat, nodes of the bones, fungous excrescences about the anus, blotches over the body, with almost every other symptom of Syphilis, yet not an instance has occurred to me, as I have observed above, nor have I heard of any, where Gonorrhœa took place in it. Whether it is that the infected conceal it longer than usually happens in towns, I shall not pretend to determine; but certain it is, that the symptoms of Sibbens are more inveterate than we commonly find them to be in the ordinary form of *Lues Venerea.*

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neres, that even those who get it in the most innocent manner, are so much ashamed of it, that they never speak of it as long as it can possibly be kept secret,

They are certainly more infectious; so that the slightest communication is apt to produce the disease. The symptoms spread more rapidly, and a greater quantity of mercury is, for the most part, required to remove them; but still *Gonorrhœa* never ensues from them*.

Some years ago, a disease very similar to this broke out among the country people of Canada, owing, as was imagined, to communication with some of the soldiers quartered among them, who were infected with *Lues Venerea*. It is attended, as is the case with *Sibbens* in Scotland, with all the symptoms of *Syphilis*, in the most virulent form of that disease; and it is so very infectious as to be communicated by eating or drinking out of the same vessel, or drying with the same cloth that has been used by those who labour under it. It often enters the constitution by absorption from the surface, without any previous ulceration: In which case it afterwards

* For a farther account of *Sibbens*, see Chapter IV. Section VII.

wards breaks out in buboes, nodes, ulcers, and other symptoms of a confirmed Lues; but not an instance, I am informed, has happened, of Gonorrhœa being produced by it.

This, as well as what has occurred in the progress of Sibbens, is precisely what happened with Lues Venerea, when it first appeared in Europe, as well as at a late period in the South Seas; so that there cannot be a doubt of the same circumstances taking place wherever Syphilis only is communicated. We have seen, in all these instances, that Gonorrhœa has never arisen from it, which surely it often would have done if the two diseases were of the same nature, and produced by the same contagion. They could never, in that case, have remained for any length of time so distinct and precisely marked; for the one must necessarily, in almost every instance, have soon been productive of the other.

As a farther support of this opinion, I may add, that if the two diseases were of

the same nature, and produced by the same infection, the remedies proving useful in the one might be expected to prove likewise so in the other. Instead of this, we find that the remedies upon which we depend with most certainty in Gonorrhœa, have no influence in the cure of Syphilis; while mercury, which is the only remedy, as I have observed above, upon which any dependence can be placed for the cure of Syphilis, does not, in Gonorrhœa, produce any advantage. Nay, that in some cases, it evidently does harm.

We also know, that Gonorrhœa will often terminate whether any remedy be employed or not, merely by moderate living, and keeping the parts regularly clean. The disease by this alone will, in most instances, become gradually milder, till at last it will disappear entirely. No such thing, however, happens in Lues Venerea. In this, as I have already remarked, even the mildest symptom becomes daily worse, unless mercury be employed;
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nor will any practitioner of experience trust the cure even of the slightest chancre to any other remedy.

Upon this evidence alone, of the method of cure of the two diseases being so essentially different, we might, I think, conclude that they are different in their nature, and that they proceed from different contagions. Were they of the same nature, and proceeding from the same cause, it is not possible to conceive that any medicine would act as a certain cure for the one and do harm in the other; and yet every practitioner will admit that mercury is the only remedy hitherto known, upon which we can depend for the cure of *Lues Venerea*, while it evidently often does harm, as I have already observed, in *Gonorrhœa*.

If the subject now under discussion was merely speculative, I should not have entered so minutely into it; for in that case it would have been a matter of indifference, both to practitioners and patients, whether

whether the two diseases were of the same nature or not; but, as the treatment of Gonorrhœa should have much dependence upon this circumstance, I judged it proper, before proceeding to treat of it, to make this attempt to have the point in question ascertained.

CHAP.

CHAPTER II.

Of Gonorrhœa Virulenta.

SECTION I.

General Observations on the Symptoms, Causes, and Seat of Gonorrhœa Virulenta.

EVERY discharge of matter from the urethra, excited by impure coition, is termed *Gonorrhœa Virulenta*. As the term implies a discharge of semen, and as this disease is not necessarily attended with any feminal evacuation, it is here obviously misapplied; but I think it better to retain even a faulty denomination, when

when very universally received, than to incur the hazard arising from the confusion which might ensue from the proposal of amendments.

The period at which the discharge takes place, after exposure to infection, is always uncertain. I have known it happen in a few hours; often in the course of a day or two, although in some instances not till several weeks have elapsed. From the third or fourth day, to the seventh and eight, is the most frequent period.

This does not appear, however, to have any effect on the nature or violence of the symptoms. Some indeed have imagined, that the disease must be mild or severe according as it appears early or late after the matter of infection has been applied; but this does not accord with my observation. I have often known the symptoms mild when they appeared early after exposure to infection, and severe when much time had elapsed. In a very obstinate case of Gonorrhœa, the running did not appear till nearly the ninth week from
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the time of infection. A gentleman failed from Jamaica two days after having connection with a woman of suspicious character. No symptoms appearing till several weeks had elapsed, he concluded that he had escaped ; when, two days before coming into port, being the fifty-eight of his voyage, a very copious running appeared.

In some few cases, the discharge takes place without the patient having any warning of its approach ; but, for the most part, it is preceded by symptoms indicating some degree of inflammation in the urethra : A sense of fulness and tightness is felt over all the under part of the penis ; the patient has a more frequent desire than usual to void urine, accompanied with a peculiar kind of itching heat along the urethra, at the same time that the extremity of that canal is observed to be of a more deep red colour than ordinary, and more than usually tender to the touch. In some cases, too, the urethra seems to be contracted, or lessened in its diameter ;
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the urine coming off in a stream much smaller than natural, while at other times it is forked, as if the passage was divided in two.

On the first appearance of the discharge, it is sometimes white, and nearly of the consistence of purulent matter; but, for the most part, it is thin, and of a yellow green colour. In some cases it is brown, resembling the discharge of old scorbutic sores, and in others it consists almost entirely of blood, owing to the erosion or rupture of one or more blood-vessels in the urethra. In a great proportion of cases, the discharge of matter, and scalding heat in making water, are the only symptoms which take place; but in others, these are accompanied with chordee, or painful involuntary erections; with much uneasiness in the testes, which frequently become so tender and irritable that the slightest touch excites pain. Severe degrees of pain often stretch from the penis to the groins and thighs; and in some cases

cases over all the abdominal viscera, particularly over the under part of the belly.

In some cases the chordee, and in others those sympathetic pains stretching to the groins, and contiguous parts, are the most distressful symptoms of the disease. I have known the latter so severe as to render the patient unable to make any bodily exertion; while the chordee, which is usually worst in bed, is apt to deprive him entirely of sleep.

Besides these pains in the parts contiguous to the penis, and which we suppose to be chiefly the effect of nervous irritability, the glands in the groin in some instances swell, and become hard; but, unless the running be accompanied with chancres, these swellings very commonly subside, and do not proceed to suppurate; an important fact, which may be considered as an additional proof to what was mentioned in the last chapter, of the difference between *Gonorrhœa* and *Lues Venerea*.

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In the course of the disease the glans penis sometimes becomes red and inflamed, and a yellow foetid matter oozes from its whole surface. In some this is accompanied with evident ulceration: in others the skin remains entire, and the matter is observed, upon pressure, to proceed from an infinite number of small points. In both they are supposed, by many, to proceed from the matter passing out of the urethra, and allowed, by the negligence of the patient, to rest too long upon the tender cuticle of the glans; but, in some instances, this inflammatory affection of the glans, and discharge with which it is accompanied, takes place of itself, and without any discharge from the urethra. In which case, from the resemblance which the matter bears to that of Gonorrhœa, it has usually been termed *Gonorrhœa Spuria*. This inflammation occasionally spreads to the prepuce, in which it very commonly excites some degree of contraction. When the prepuce becomes so much straitened that it cannot
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be drawn back, a disease is formed, which we term Phymosis; and, when it contracts behind the glans, a disease termed Paraphymosis takes place.

Although in Gonorrhœa some degree of uneasiness is usually felt along the whole course of the urethra, yet we know, that in most instances, the seat of the disease lies within an inch, or little more, of the point of the penis. In a few cases, however, whether from maltreatment of the disease, from the infection being more than usually virulent, or from peculiarity of constitution of the patient, the disease spreads backward till it extends over the whole length of the urethra, even to the bladder itself. The prostate gland and internal coat of the bladder become affected, and sympathetic pains stretch from these parts along the ureters to the kidneys.

When the bladder becomes in this manner diseased, the state of the patient is, for the most, extremely miserable: he feels almost a constant desire to pass water,

accompanied with severe pressure or bearing down upon the parts affected, proceeding from involuntary spasmodic contractions of the abdominal muscles. The whole region of the loins, particularly about the kidneys, becomes so painful and irritable, that much distress is excited by whatever tends to bring the muscles of these parts into action, and the patient often complains of a very distressful degree of tenesmus, and of a frequent shooting pain about the anus and neck of the bladder.

In this stage of the disease there is seldom any considerable discharge from the urethra; but, for the most part, a large quantity of very viscid-fœtid-mucus is discovered in the urine, which, in the course of a few hours, subsides, and adheres so firmly to the sides of the vessel as not to be easily separated.

When Gonorrhœa has either been improperly treated, or when much inflammation takes place from any other cause, the testes are apt to swell and inflame, and abscesses often form in Cowper's glands,

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as well as in other parts of the urethra. When these burst outwardly, or when the urine by any means finds access to the collections of matter, they not only prove the source of severe distress to the patient, but of much perplexity to the practitioner, as they frequently baffle every attempt that is made for removing them.

It will readily be conceived that all the symptoms which I have described are seldom met with in the same patient, and that they will take place in very different degrees in different cases. This is particularly remarkable in the quantity of discharge, which, in some instances, is so trifling as scarcely to excite any inconvenience, whilst, in others, it is so profuse as to prove highly distressful. In some too, the heat of urine is so inconsiderable as not to deserve notice; and in such instances also, the desire to pass water is seldom frequent; while, in others, these symptoms are both so severe as to prove highly distressful.

In most instances of Gonorrhœa the external inflammation is confined to the extremity of the urethra; but, in some cases, it runs so high as to spread over the whole glans, where it might be expected to terminate, as inflammatory affections in other parts of the body most frequently do, in the formation of abscesses. This, however, very rarely happens. I have observed above, that, in a few instances, a purulent-like matter oozes from the whole surface of the inflamed glans; but I have scarcely known an instance of any extensive abscess in the substance of the glans. The inflammation, for the most part, terminates by dispersion. In a few cases it ends in mortification.

In women the symptoms of Gonorrhœa are, for the most part, much milder than in men. It sometimes happens that a flow of matter is all that occurs; and, as the discharge is very similar to the matter of fluor albus, the two diseases are often mistaken for one another.

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This absence of pain, however, takes place only where the vagina is the seat of the disease. When the urethra is affected, the symptoms are nearly the same as in the other sex. A distressful degree of irritation occurs at the extremity of the urethra, accompanied with heat of urine, and a very frequent desire to pass water. In some cases the inflammation spreads to the bladder, and even to the kidneys, uterus and ovaria; or, at least, these parts come to be so much affected with pain, as to give cause to suspect that they are in a state of inflammation. Pain, even in a severe degree, will no doubt occur from nervous sympathy alone, and this I believe to be frequently the case here; but I have met with different instances of a considerable degree of inflammation being excited by Gonorrhœa in all the parts which I have mentioned: that is, they have become swelled, hard, and excessively painful, insomuch that the slightest touch would create a great degree of distress; and blood-letting with other evacuations,

were the only remedies from which relief was obtained. In some cases the matter is so sharp and acrid as to excoriate the clitoris, nymphæ, and labia pudendi. This excites much uneasiness; more than ever takes place in men from a mere affection of the external parts; for, as these parts are in women pressed upon in sitting, the slightest degree of inflammation is, from this cause alone, productive of much distress. They are often obliged to remain constantly in bed; being unable either to walk, stand, or sit.

It is impossible, in any case of Gonorrhœa, to determine at first, in what manner it will end; for we often find the most severe, as well as the most obstinate discharge, succeed to the mildest symptoms, while in some cases the discharge ends quickly and easily, where the symptoms at first were severe. An opinion commonly prevails, that the disease will be mild, and of short duration, where the running is white or yellow; and that it will necessary prove severe and tedious, where

where it is at first green, or much tinged with blood. This, however, is far from being universal; for instances occur daily, of the running proving tedious, where it was at first of the colour and consistence of purulent matter, while others often happen of its ending quickly, where the matter was at first either deeply tinged with blood, or of a deep green colour.

In the progress of *Gonorrhœa*, we reckon it a favourable circumstance to observe the matter become thick and ropy. This cannot indeed be mentioned as an infallible proof of the discharge being soon to terminate; but it is, undoubtedly, a very desirable appearance. When the discharge does not soon become ropy, it is apt to terminate in gleet, the most perplexing symptom in the disease, and of which we shall speak more particularly in an ensuing chapter.

I shall hereafter have occasion to observe, that a discharge, very similar to the matter of *Gonorrhœa virulenta*, may be produced by different causes: At present

it is only necessary to remark, that, in this disease, the discharge is obviously the effect of irritation excited in the membrane of the urethra and contiguous parts, by matter from an infected person being applied to them.

Some difference of opinion has arisen of the manner in which the matter of infection is communicated to the urethra. By some it is supposed to be first absorbed from the surface of the glans, and afterwards deposited on the membrane of the urethra; as they do not think that it can pass directly into the urethra, during coition. No good reason, however, can be given for this opinion: it appears more probable that the matter at first finds access between the lips of the urethra; that it afterwards spreads, in a gradual manner, along the passage, by mixing with the mucus with which it meets, and that the progress which it makes, will, in a great measure, depend upon the parts to which it is applied being more or less susceptible of inflammation; upon the general

neral state of health of the patient ; upon his manner of living ; and perhaps upon other causes.

I do not conceive, however, that the kind of matter by which the discharge is produced has so much influence on the violence or duration of the symptoms as has been imagined. It is indeed the opinion of some that a severe and obstinate case of clap may always be traced to an infection of some peculiar degree of virulency ; but this will not be found to happen with any kind of uniformity. So far as my observation goes, it is nearly the same in Gonorrhœa as in small pox. The mildness or violence of symptoms does not appear to depend upon the matter by which the disease is produced so much as upon other circumstances. Hence the same woman will, under the same infection, communicate the most virulent symptoms to one person, and the mildest to another.

That much depends upon the habit of body of the patient, and upon his manner of living, will scarcely be doubted :

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Of this the following fact will serve as an illustration. Three gentlemen, who associated much together, and who were accustomed to live freely, returning one night from a drinking club, resolved to visit a girl of the town, and a friend went along with them who had that night been a visitor in their society, but who usually lived with much sobriety. They all had connection with the same girl. Each of the three associates had a very severe clap, while the other, who also received the infection, had the disease in the mildest form. This would not, even in similar circumstances always happen, as we sometimes find people who live with much circumspection, liable to very severe degrees of Gonorrhœa; but, for the most part, the degree of violence of the disease has a certain dependence on the course of life to which the patient is accustomed.

The matter of Gonorrhœa being similar to that of sores in other parts of the body, and the quantity being often very considerable, it was, till of late, the prevailing opinion

nion, that it arose from sores or ulcers in the urethra. We now know, however, that in *Gonorrhœa* the parts are seldom ulcerated, and whenever ulcers take place, that they may be traced to some accidental cause, such as the rupture of a blood-vessel, in no degree necessarily connected with the existence of the disease. On dissection, after death, it is found, almost in every instance, that the membrane of the urethra is entire, and that the matter is produced by inflammation alone.

It had long been known, that on dissection, instances occasionally occurred in which no degree of ulceration in the urethra was discovered. This, however, was considered as a singular occurrence, and that it did not happen but where the symptoms were uncommonly mild; for at that time it was supposed, that ulceration, or a destruction of parts, was requisite for the production of matter. But we now know, that this is by no means the case, and that an inflamed surface, even where no abrasion is perceived, will produce

duce all the varieties of matter which sores ever afford, and that different kinds of animal fluids may be converted into these, merely by being kept in certain degrees of heat.

By this the difficulty is removed, which otherwise we must have experienced in accounting for the large quantities of matter daily discharged from the urethra in Gonorrhœa; which, in some cases, is so abundant, that nothing less than an affection of the whole extent of that canal could afford it. Now those who imagine that the matter proceeds from ulcers, have never gone so far as to say that the urethra is ever ulcerated through its whole length; nor could it probably happen, but with such consequences as very seldom ensue from Gonorrhœa.

The circumstance to which I allude forms an unanswerable objection to the idea of ulcers being frequent in Gonorrhœa, even although no opportunities had occurred of proving it by dissection. Where the membrane of the urethra is in
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any point ruptured, either by the bursting of an abscess into it, or by any other cause, the most distressful consequences universally ensue: By the urine passing into the contiguous parts, swellings are produced which usually terminate in fistulous openings, that prove always tedious, painful, and of uncertain event. Every practitioner knows, that even the slightest communication between the urethra and contiguous parts is apt to terminate in this manner; so that, if the matter of Gonorrhœa arose from ulceration, the consequences of almost every case, would necessarily prove more severe than we ever, in any instance, find them to be.

In long continued Gonorrhœa, the membrane of the urethra is apt to be so relaxed, that fungous productions form in different parts of it. These not only impede the passage of the urine, but, becoming soft and tender, they at last ulcerate, and throw out very abundant quantities of matter. This, however, is not the cause of Gonorrhœa, but merely the effect
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of it. It often proceeds from mismanagement, either on the part of the patient or practitioner; and sometimes from some constitutional disease to which the patient at the time may be liable.

Instead of ulceration, we find, that in a great proportion of cases, there is merely a slight degree of inflammation, extending from the extremity of the glans to an inch or perhaps an inch and half up the urethra. In more obstinate cases, Cowper's glands, with their ducts which terminate in the urethra, are found affected. In a third stage of the disease, the prostate gland, and contiguous parts of the urethra, are inflamed; and in the fourth, and what may be reckoned the most distressful stage of clap, the internal coat of the bladder is found inflamed. For the most part, the inflammation is confined to the neck of the bladder; but I have met with instances of its being perceptible over the whole of it, and of its even extending along the ureters to the kidneys.

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This inflammation, however, is chiefly obvious at first. On a long continuance of the disease, the parts affected, instead of being either inflamed, or in a state of ulceration, are merely of a more pale colour than natural; the membrane of the urethra is found soft and relaxed; and coloured mucus or matter may be pressed out from an infinite number of small points over every part of it that has been diseased.

This is precisely what happens with every membrane that has remained long under a slight degree of inflammation, particularly with the membrane of the nose and trachea. These parts often afford very considerable quantities of matter, for a great length of time, or of mucus that much resembles matter; and yet, upon dissection, they are seldom or never found in a state of ulceration, the trachea being for the most part only slightly inflamed. I may here indeed remark, that the resemblance between Gonorrhœa and Catarrh, is, in certain stages of the two diseases,

diseases, very remarkable. They seem both to originate from inflammation excited upon a membraue. The matter of the one is in many instances very similar to that of the other. They seem both to be entirely local ; and the parts on which they are seated are, after death, found to be affected in a similar manner.

But although, in the latter stages of Gonorrhœa, in which opportunities for examining the state of the parts after death chiefly occur, the inflammation is found to be for the most part inconsiderable, yet, in the commencement of the disease, the parts are often highly inflamed, particularly when those about the neck of the bladder are affected. This is obvious from the symptoms ; more especially from the violent pain which always takes place, as well as from the antiphlogistic remedies employed for the cure of the disease.

SECTION II.

Of the Prognosis in Gonorrhœa Virulenta.

IN every disease, it is of importance for practitioners to be able to say at what time and in what manner it will end. In none is this kind of information more anxiously desired than in Gonorrhœa. The hopes and fears of patients lead them equally to wish for it; but, from various causes, and more particularly from want of attention to the exact site of the disease, the duration of Gonorrhœa has always been a matter of much uncertainty.

I have observed above, that four different set of parts are found on dissection to be the seat of Gonorrhœa. When the discharge proceeds from the parts near to the extremity of the penis, as happens in a great proportion of cases, there is for the most part, much cause to hope that a

cure will soon be obtained. In such instances, when the patient is otherwise in good health, and does not interrupt the progress of the cure by improper conduct, the disease will not commonly endure a fortnight. Nay, in such circumstances a cure is often obtained in two or three days: but, whenever the upper part of the urethra is affected, particularly when the prostate gland and other parts about the neck of the bladder are diseased, the running, in almost every instance, proves obstinate. Even our most powerful remedies in other cases of clap are here doubtful in their effects. Hence no certain opinion can be formed of the event of the disease.

When these deep-seated parts are affected, Gonorrhœa proves always tedious whatever the habit of body may be; particularly if the constitution is affected with scrophula: In scrophulous patients, indeed, even the most simple case of clap is apt to become obstinate; of which I have met with such a number of instances, that

that wherever the two are combined, I always give a guarded prognosis of the time necessary for a cure. The disease is no doubt in some instances easily cured, even in patients of this description; but, for the most part, the discharge goes on for a great length of time, and resists, for a longer period than usual, the effect of every remedy we employ to remove it.

This uncertainty that we frequently meet with in the treatment of *Gonorrhœa*, and the great length of time to which the discharge, in some instances goes on, together with the many untoward and unexpected occurrences which often happen during the cure, tend altogether to render this branch of practice the most distressful of any in the province of medicine. In a great proportion of cases a cure with proper treatment is easily and speedily obtained; but every candid practitioner will admit, that cases often occur, in which the discharge continues, obstinate for a great length of time, even under the use of the most powerful remedies with which

we are acquainted. But, by distinguishing between one stage of the disease and another, and thus giving an opinion to patients of the probable event of it, practitioners would avoid a good deal of embarrassment which they often experience from giving so indiscriminately as they commonly do, a favourable prognosis at the commencement of every case that occurs to them.

In forming a prognosis, it ought always to be kept in view, that however mild the symptoms may be at first, they may very quickly and unexpectedly become severe, by the disease proceeding from one part of the urethra to another, or even by the inflammation in the part which was at first affected becoming more severe. This arises from various causes, and often from circumstances which it is not in the power of practitioners to prevent. It sometimes occurs, indeed, from the use of improper remedies; particularly from acrid injections being used with too much freedom; but it happens much more frequently

quently from other causes, particularly from the tendency which inflammation in one part of a membrane has to spread itself over the whole of it: as well as to the misconduct of patients, who, instead of living as they ought to do, very commonly go on, during the cure, in the same course of riot and debauchery by which they were at first exposed to infection. Some patients, even under such circumstances, will no doubt get well; but there is not a more undoubted fact than this, that the cure of the disease is for the most part both difficult and uncertain, where the patient lives in a riotous and intemperate manner.

SECTION III.

General Observations on the Cure of Gonorrhœa Virulenta.

GONORRHOEA, as I have observed above, was never, till of late, considered as a local disease. It was supposed at all times to affect the constitution, so that a cure was never attempted but by remedies which operate upon the system at large.

For a considerable time mercury was chiefly relied upon. It was employed on the supposition of Gonorrhœa being a symptom of Lues Venerea; but experience having shewn that no advantage was derived from mercury by itself, other remedies were employed along with it. These consisted chiefly of demulcents, evacuants, and astringents.

By a plentiful use of mucilagenous drinks, and other demulcents, it was meant

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to sheath the bladder and urethra more effectually from the acrimony of the urine, and at the same time to render the urine itself less acrid. Purgatives were employed for the purpose of carrying off the morbid matter of the disease, and nitre and other remedies were given with a similar intention; and lastly, as the running was seldom lessened by the use of any of these, but, on the contrary, being frequently increased during the use of them, bark, astringent baljams, and other corroborants, were prescribed for putting a stop to it. In some cases mercury was continued during the whole course; in others it was left off at the time of entering upon the use of astringents.

As this treatment of Gonorrhœa prevailed, even at a late period, when every other part of the practice of medicine was greatly improved, we are astonished to meet with such deficiency as it evinces, in the management of a disease which necessarily fell frequently under observation. If patients had been left to themselves,

without any interference on the part of practitioners, the disease would often in the course of time have disappeared of itself, and without any injury being done to the constitution; for a simple clap we know will often dry up whether any remedies are employed or not: but, by a free use of strong purgatives, and especially when this was conjoined with a low diet and a course of mercury, the constitution was so much debilitated that this alone rendered almost every case that occurred exceedingly obstinate: hence Gonorrhœa was considered as the most distressful, as well as one of the most dangerous diseases to which the human body was liable. Lues Venerea was, for the most part, easily cured by mercury; but no advantage was derived from it in Gonorrhœa: the disease usually proved exceedingly obstinate, and was apt to terminate either in gleet or in obstructions of the urethra.

It soon appeared to practitioners of observation, that the medicines employed for Gonorrhœa, instead of proving useful, rather

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ther did harm; but the period was not yet arrived in which a more effectual remedy was to be proposed. Some, however, went so far as to say that medicines of every kind might be avoided, as they had found, from experience, that the disease went off both more easily and more quickly when left to itself, than it commonly did with the remedies which at that time were universally used for it. A low diet, mercury, and evacuants of different kinds, did much harm, as I have already observed, by inducing such a degree of debility and relaxation as materially affected the constitution; and the drastic purgatives, of which large doses were given daily, proved highly prejudicial, by the irritation which they excited in all the parts contiguous to the rectum: In some stages of Gonorrhœa strong purgatives never fail to increase the pain; to excite a more frequent desire to pass water; and to increase the discharge: nay, I have known various instances of a return of all the symptoms of Gonorrhœa being induced

induced by the operation of a brisk purgative long after the patient considered his cure as complete.

We need not therefore be surpris'd at the proposal for laying all remedies of such violent operation entirely aside; and it must be admitted that a cure would often take place, that is, the running would disappear, together with all the symptoms which attend it, without the aid of medicine. This would frequently happen in mild cases of the disease; where the patient was possess'd of a healthy constitution; and the running not kept up by any act of impropriety on his part. The running would disappear here, as happens in *corryza* and other instances of matter proceeding from an inflamed surface, whether any remedies should be employed or not: but it would seldom be the case where the symptoms were severe; nor where the patient did not live in every respect as he ought to do. In all such cases the cure would prove tedious and uncertain, and the

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the constitution would frequently be ruined in the attempt.

When this mode of cure was proposed, an opinion prevailed that the discharge was kept up by some general affection of the constitution, and that nothing therefore could be so safe or so proper as to allow it to continue as long as any part of the morbid matter remained, by which it was supposed to be produced. At that time it was admitted by all, that Gonorrhœa was of the same nature with Lues Venerea. Chancres, as well as other venereal sores, were kept open till a cure was obtained by the internal use of mercury. An erroneous idea prevailed of some advantage being derived from the discharge which they produced; and hence, even by those who saw clearly that no benefit was obtained from mercury in Gonorrhœa, it was still considered as the best practice, to allow the disease, as they said, to discharge itself in this manner.

Even granting that the matter of Gonorrhœa were the same with that of Lues Venerea,

Venerea, there is no cause to imagine that any advantage would ensue from this practice; for we know that venereal sores are never cured by the quantity of discharge which they afford: but we now have no reason to doubt of the two diseases being perfectly different. A practice, therefore, which at one period might have been judged proper in one disease, would now be inapplicable in the other; and hence it has very generally, been laid aside, although not yet given up by some individuals.

From the observations which I had occasion to make in the last chapter, as well as from other circumstances, few will now doubt, that the matter of Gonorrhœa, proceeding in most instances from an inflamed state of the membrane of the urethra and contiguous parts, gives a local affection only, without being productive of any general disease of the constitution. From this view of the subject, we have no reason to expect advantage from remedies applied to the system at large, while it is obvious
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that local remedies only can prove useful. In the treatment of a simple sore, of a cut, a burn, or excoriations from any cause whatever, we would not surely expect to succeed by mercury, purgatives, or other medicines directed to the constitution. In all such circumstances we trust entirely to local remedies, unless the presence of fever, or some other general affection, render a different treatment necessary. For the same reason we ought, in Gonorrhœa, to depend entirely upon such remedies as act chiefly upon the parts affected; no others being necessary if it be not occasional blood-letting, and other evacuations, when fever, plethora, or much inflammation take place.

In local affections of other parts our remedies are easily and directly applied: in the urethra some nicety and attention is necessary, not only in the mode of applying them to the diseased parts, but in judging of the period of the disease, or rather of the state of the parts to which they are to be applied: in other situations
these

these circumstances fall directly under view, and we judge from appearances of the propriety of applying one remedy or another. In the urethra we are directed entirely by the symptoms, and we judge from these, of the remedies to be employed, as well as of the parts to which they are to be applied being in a fit state for receiving them or not.

If the same parts were always affected in Gonorrhœa, we might, in every instance, proceed without hesitation in the conduct of the cure; but, although the matter in the commencement of the disease proceeds perhaps always from some degree of inflammation, yet, in some instances, parts are affected with inflammation, to which it would be improper, and even hazardous, to apply the same remedies which, in a great proportion of cases, are used with much safety and advantage.

We shall afterwards have occasion to shew that, in certain circumstances of Gonorrhœa, bougies may be used with much benefit; but, for the most part, we depend

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pend entirely upon injections, and chiefly upon such as are of a drying astringent nature. Now it is obvious, that although we may with safety apply an astringent solution to an inflamed surface, as happens daily, where the membrane of the urethra only is affected, yet that much risk might ensue from the same solution being applied to the ducts of inflamed glands: in the one case the discharge produced by the inflammation will be lessened and soon removed, and the inflammation itself will subside; while, in the other, by a sudden stop being put to the discharge of a gland already in a state of increased irritability, more inflammation would be excited, the parts affected would swell and become painful, and at last the discharge would burst forth with redoubled violence.

That this frequently happens in the course of business every practitioner of candour will admit: nay, almost every patient who has been liable to severe degrees of Gonorrhœa, must have have met with it: For a day or two the running will

will often disappear, and the patient considers the cure as complete, when, after some degree of tension and uneasiness along the greatest part of the penis, particularly in the perineum, the discharge recurs as before, with every appearance of a recent infection.

Many who condemn the use of injections in *Gonorrhœa*, do it upon the supposition of this being one of the inconveniences which they produce; but we shall presently have occasion to see that this is by no means the case, and that it proceeds entirely from a misapplication of the remedy; from using it in a state of the disease for which it is improper; and not from the remedy itself being of a hazardous nature.

This leads us to revert to the necessity of distinguishing between one state of *Gonorrhœa* and another. In the description of the symptoms, I remarked that they are evidently distinguishable into four sets, indicating four states or stages of the disease; and as it is a point
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of much importance in practice to have the different stages clearly marked, I shall now proceed to treat of them in separate sections.

SECTION IV.

Of the First Stage of Gonorrhœa.

IN the first stage of Gonorrhœa the symptoms are always moderate. The extremity of the urethra appears red, full, and somewhat prominent. The glans becomes tender and irritable, and ardor urinæ take place in a lesser or greater degree, according to the extent of the inflammation. The heat of urine is seldom considerable ; but, in some instances, even in this stage of the disease, it is so severe as to excite a good deal of uneasiness. Chordee sometimes occurs, but seldom in any considerable degree.

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In the history of the disease we have seen, that the membrane of the urethra alone is affected in this stage of it, the inflammation by which the discharge is produced not extending to any other part.

We judge this to be the case when those symptoms only appear which have just been enumerated; when no glandular swellings are discovered along the course of the urethra, and particularly when the discharge proceeds from within an inch, or an inch and a half of the extremity of that canal.

This circumstance of the discharge arising from the extremity of the urethra, is at all times a proof of the inflammation not having advanced farther than to constitute what I have denominated the first stage of the disease. No glandular swellings are ever discovered while the running proceeds from these parts; and, on dissection after death, the membrane of the urethra alone is found inflamed: but, in some instances, the discharge proceeds even from the superior parts of the urethra,

urethra, while none of the contiguous glands are affected. This I consider as constituting the first stage of the disease, equally as when the extremity of the urethra is alone affected. The symptoms are not more violent in the one than in the other, and the method of cure is the same in both. I must however admit, that we do not frequently meet with this; for, where the upper part of the urethra is affected, the inflammation is apt to spread to the contiguous glands, where it commonly terminates in the second, third, or perhaps in the fourth stage of the disease.

We ascertain the place in the urethra from whence matter is discharged, not merely from the height to which the pain or uneasiness with which it is accompanied may extend, for this proves often an equivocal mark of distinction; but from compressing the passage at any given spot, and pressing out all the matter between it and the end of the urethra; after which, if more matter can be brought down on the pressure being removed, we are sure

that it must come from a greater height, and by proceeding in a gradual manner upwards, we may thus discover almost the exact spot from whence the discharge has arisen: Hereafter it will appear that our being able to do so is of importance in the conduct of the cure.

From what has been said it will appear, that the discharge in this stage of the disease proceeds altogether from inflammation of the membrane of the urethra, without any affection of the glands which open into it; and in the removal of this the cure of the disease in a great measure consists.

Where the inflammation is considerable, as we judge it to be when the ardor urinæ is severe, it may be proper, if the patient is of a full habit of body, to prescribe blood-letting, a dose or two of any gentle laxative, and a low cooling diet. At the same time violent exercise of every kind should be avoided, particularly riding on horseback.

Inflammation, however, in this stage of the disease, is seldom so considerable as to render

render blood-letting necessary: in ordinary cases we now trust entirely to injections, and in all periods of the discharge I use them with equal freedom. Even where blood-letting, and a strict attention to an antiphlogistic regimen is necessary, I seldom avoid an immediate and early use of injections.

Those who are not in the daily practice of using them, are afraid of this free use of injections: some, indeed, never employ them, from the prejudice which still remains against them among all the older practitioners; while others admit that they may be used with safety and advantage in the latter period of the disease, but never in the beginning, or while much inflammation continues.

This, however, is a timidity that will soon vanish with all who venture upon a more general use of them. They will find, that injections of a sufficient degree of astringency for removing the discharge, may in this state of *Gonorrhœa* be employed with safety, even in the com-

mencement of the disease, and whether the inflammation is mild or severe.

An idea is still, indeed, entertained by many, that the discharge should not be stopped till some of the virulency by which it was produced is carried off; and hence they object, as I have just observed, to the early use of injections. But, as we have seen that Gonorrhœa is a local affection, and as we know that in other parts of the body local inflammation may at all times be removed with safety, nay, that it is the best practice to attempt it, we might from this alone infer, that it would be equally proper here. But independent of this, I can with confidence assert, and all who employ injections freely will do so, that they may in this stage of Gonorrhœa be used at all times, and with more certainty of proving successful the more early they are applied. Of this I am so clearly convinced, that I would advise all who have it in their power, to employ injections instantly on the discharge taking place. They commonly, indeed, prove useful at
whatever

whatever period they are applied ; but I have uniformly found that they act more quickly in the commencement of the disease than in the later stages of it.

While different opinions prevail of the most proper period of the disease for using injections, practitioners also entertain different ideas of the kind of injections best calculated for the periods in which they are employed. In the commencement of *Gonorrhœa*, and at all times when much pain takes place, it is the opinion of many that emollient injections only should be used, such as warm oil, emulsions of almonds, and infusions of althea, and lint-feed : but in this there appears to be some mistake ; I can decidedly say from having often experienced the inefficacy of the practice.

When I first entered upon business, it was the opinion of many who used injections with freedom, that those of the emollient kind ought alone to be advised, while much heat of urine, or any considerable degree of inflammation continued.

Injections of this description, they supposed, would sheath and protect the urethra from the acrimony of the urine, and on the inflammation subsiding, they conceived that these of an astringent nature might be used with safety. The opinion was plausible, and supported by some of our best practitioners: I was therefore induced, along with others, to go into it, but it soon appeared that no advantage was to be derived from it: on the contrary, it was evidently the cause of much distress, by rendering the cure of Gonorrhœa much more tedious than it otherwise might have been; for injections of the emollient kind never tend to shorten the continuance of the discharge, and often render it more fixed and permanent, by relaxing the parts from whence it proceeds.

Neither are emollient injections necessary as preparatives to those of the astringent kind: in this conviction I have for many years past laid them altogether aside, during which period I have used none
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but such as are evidently astringent ; and although I employ them with much freedom, no bad effects have ever ensued from them.

In the first stage of *Gonorrhœa*, astringent injections may be used with safety from the very commencement of the discharge, as well as at any period of the disease, whatever the degree of inflammation may be. Instead of increasing the inflammation, they tend, when of a proper strength, to lessen it ; they relieve more immediately than any other remedy, the ardor urinæ ; and they commonly lessen or remove the discharge in a short space of time.

Wherever it appears, therefore, that the discharge proceeds entirely from the membrane of the urethra, I pay no regard to the length of its duration ; the patient is immediately put upon the use of injections, and no harm ever ensues from it.

There is only one symptom which, in this stage of *Gonorrhœa*, precludes the immediate use of injections, pain and swelling

ling of one or of both testes : a perseverance in the use of injections during the continuance of this symptom very commonly does harm, and ought not therefore to be advised ; not that they tend to increase the inflammation, even of the testis ; but by removing the discharge from the urethra, they deprive us, as we shall afterwards see, of one of the most effectual remedies for a swelled testicle proceeding from Gonorrhœa.

A variety of astringent injections are employed by practitioners, but some proving more useful than others, an investigation of this part of our subject appears to be necessary.

Almost every liquid possessed of astringency, will lessen the discharge. Port wine, and claret, duly diluted, sometimes answer. I have often succeeded with a tea-spoonful of brandy added to half an ounce of rose water : nay, rose water itself, or even cold water directly from the spring, will often give a stop to the discharge ; but, for the most part, the effect
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of these is merely temporary. In slight affections, indeed, they sometimes complete the cure, but in general we are under the necessity of employing more powerful astringents.

In almost every injection first employed in *Gonorrhœa*, mercury, in one form or another, was an ingredient. It was not, however, used as an astringent; for at that period the use of every kind of astringent would have been judged to be hazardous. Mercury being applied in this manner directly to the seat of the disease, many supposed that it might act as a specific in the cure of it. But although I have given full and complete trials to mercurial injections, and in every variety of form, I have not in any instance, found them prove more effectual than other astringents. In order to ascertain with as much certainty as possible the point to which I allude, I have repeatedly made it the subject of experiment. Of different patients in *Gonorrhœa*, all nearly distressed with similar symptoms, some have been made to employ

ploy a mixture of calomel with mucilage and water; others have used quicksilver dissolved in mucilage, while some have at the same time been using injections in which mercury did not enter as an ingredient.

I admit that in most of these instances mercury proved useful, but by no means in such a degree as many of the articles with which it was thus put upon a comparative trial. There is no cause, therefore, to imagine, that it acts as a specific in the cure of Gonorrhœa.

To prevent interruption in this part of the work, formulæ are given in the Appendix to this volume, of all the preparations that I wish to recommend. Of mercurial astringent injections, the prescriptions, No. 1, 2, and 3. are perhaps the best that can be used.

Calomel used in injections seems to act in a similar manner with lapis calaminaris, armenian bole, and other astringent earths; not by any specific virtues with which they are endowed, but by restoring tone

tone to parts weakened by the disease. It is in this manner, I conclude, that all of these articles act in the cure of *Gonorrhœa*; and in cases not particularly obstinate, they very commonly prove effectual. *Lapis calaminaris*, or tutia finely levigated, suspended in thin mucilage, makes a very safe and useful injection. No. 4th and 5th are formulæ of these; and No. 6th is a prescription of a gentleman retired from business, who, at one period, was in very extensive practice in London, and who in the course of much experience in the cure of *Gonorrhœa*, gave the preference to this over all others that he employed.

These earths possess one important advantage: they never do harm in whatever quantity they are used. If levigated with sufficient care and attention, they may be used in any quantity that the liquid in which they are conveyd can be made to suspend.

Allum dissolved in water makes a safe and useful injection. It proves equally safe,

safe, and still more powerful, when conjoined with a decoction of oak bark, or an infusion of galls, for which prescriptions are given Nos. 7th, 8th, and 9th; and in some cases, injections with calcined allum have answered the purpose, where allum in every other form had been used in vain.

Kino, an astringent lately much employed in Diarrhœa, proves also an useful ingredient in injections for Gonorrhœa. In various cases it has proved successful where other articles had failed, and I have not observed that it ever does harm. As it is not very soluble in water it becomes necessary to suspend it in fine powder, by means of mucilage, as in Nos. 10th and 11th.

Opium proves often an useful ingredient in this kind of injection; and as it answers equally well whether much pain takes place or not, I conclude that it does not act so much as a sedative as it does as an astringent. Nos. 12th and 13th are formulæ of injections with opium alone, and No. 20. is a very powerful combination of opium with camphire and white vitriol.

Some of the astringent balsams properly combined with water, make a good variety of injection for *Gonorrhœa*, particularly *balsamum canadense*, and *balsamum copaiba*, as in No. 14.

Lead, in various forms, proves highly serviceable in these injections. Cerusse suspended in mucilage and water is often employed with advantage; but *acetum lythargyri*, and *saccharum saturni*, now termed *cerussa acetata*, dissolved in water, are chiefly to be trusted. Formulæ of these are given in Nos. 15th, 16th, and 17th.

Of all the astringent injections, however, which I have used, none prove so powerful as white vitriol, now termed vitriolated zinc dissolved in water. In the quantity of a grain and half or two grains to an ounce of water, it seldom creates much irritation, and it does not often fail in this variety of the disease, in which alone injections ever prove materially useful. No. 18th is the form of injection, which, in the common occurrences of daily practice, I am in the habit of using; and No. 19th is a combination of
vitriol

vitriol and acetum lithargyri, which, in a few cases, I have found to answer better than either of them have done separately.

Other astringents might be enumerated, from which very useful injections might be prepared, but the formulæ which I have given contain the most powerful of any with which we are yet acquainted. None of them will at all times prove successful; but from much experience of their efficacy, I can assert, that in this stage of the disease, injections seldom fail when properly managed and duly persisted in.

The vitriolic injection, No. 19, I have mentioned as the most useful formula of any; but it will sometimes happen that a case will readily yield to others which has long resisted this. When we do not, therefore, soon succeed with one form of injection, we ought, without loss of time, to have recourse to others, by which we with more certainty effect our purpose, than by continuing to employ the same for a long time together.

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In all the formulæ that I have given of injections, the ingredients are in such proportions as best suit the general course of business. This was a point of much importance to ascertain, and so far as my observation goes, I have done so; but cases will, no doubt, from time to time occur, in which some variety of strength is necessary. All injections should be of such a strength as to excite some degree of irritation in the urethra, but by no means so strong as to create much pain: hence, where the preparations that I have mentioned do not answer the purpose, they should be made stronger; and when of such a strength as to excite severe pain, they should be diluted.

This, I may remark, is an object that merits much attention; for while it is obvious that injections must do harm when too strong, it is equally certain, that little or no advantage is derived from them when they are too weak. I have known a cure accomplished in three days, merely by making an injection of a sufficient

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strength,

strength, where the disease had previously gone on for two or three months from this being overlooked: I consider this, indeed, as one of the most important points in the treatment of Gonorrhœa; nor does any thing distinguish the practitioner of experience with more certainty, than his being able to adapt the strength of his injections to the particular circumstances of every case that falls under his direction.

In the application of injections two circumstances particularly merit attention, the manner of throwing them up, and the frequency of using them.

They may be thrown up either with a small bag of *resina elastica*, fitted with a pipe, or with a common small syringe: whether the bag or syringe be used, the pipe should be perfectly smooth, of a conical form, not above half an inch in length, and the cone of such a thickness near the root, as not to allow the pipe to pass above a quarter of an inch into the urethra.

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The bag or syringe being filled with the injection, and the patient either standing, or seated with his breech over the side of a chair, so as to prevent the perineum from being pressed upon, the pipe, when well oiled, should be inserted into the urethra, as far as it will go, with the right-hand, while, with the left, he grasps the penis, and pulls it forward upon the pipe. The injection must now be thrown up in such a manner that it may reach the farthest part of the urethra that is affected, but not with such force as to excite pain.

When the discharge proceeds from near the extremity of the penis, very little force is requisite; but when the upper part of the urethra is affected, if the injection be not thrown up with firmness, it will not reach the seat of the disease, and hence no advantage will ensue from it. Previous, therefore, to the use of injections, the part of the urethra from whence the discharge proceeds, should be ascertained, and it can be easily done in the manner that I have mentioned.

In using injections, some judge it proper to prevent them from passing farther in the urethra than the seat of the disease ; left, by forcing the matter along with them, the infection should be carried to parts which otherwise might not have been injured. For this purpose the patient is desired to compress the urethra with the middle finger of his left-hand, at that point to which it is meant the injection should go ; while the syringe or elastic bag is employed for throwing it up in the other. But although there is no necessity for throwing injections farther than the seat of the disease, there is no cause for this anxiety in preventing them. It does not appear, that in this manner, the infection is ever communicated from one part of the urethra to another ; at least I have never met with an instance of it, and I have seldom pointed this out to my patients as a necessary piece of attention. While it does not, therefore, answer any good purpose, it certainly renders it more difficult for the patient to throw the injection

jection properly up, as he cannot both make pressure upon the upper part of the urethra, and, at the same time manage the syringe with that exactness which it requires.

The point, however, of most importance in the use of injections is, the frequency with which they should be thrown up; it is not enough that we discover a composition that will accomplish a cure, if we do not use it with that frequency which the nature of the disease requires. In common practice the patient is desired to inject the liquid two or three times a-day: this, if the injection be of a proper strength, will in course of time prove effectual; but from much attention to the subject, I am convinced, that cures would be more speedily obtained were injections more frequently thrown up. Instead of two or three times a day, I advise them to be used seven, eight, or ten times daily; by which, the cure instead of being protracted for several weeks, is often completed in as many days.

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This, I must observe, is a point of such importance in the cure of Gonorrhœa, that nothing can compensate the neglect of it. The inefficacy of injections is frequently held forth as an important objection to this mode of treatment; but, for the most part, the failure of injections will be found, in a great measure, to depend upon the cause to which I allude: Patients ought, therefore, to be urged to use them, at least as frequently as I have mentioned. When indeed the discharge lessens, or when it disappears entirely, there is no necessity for using them frequently; but while it continues undiminished, the more frequently the remedy is applied to the parts from whence it proceeds, the more quickly will it be removed.

On laying injections aside, even after the running has disappeared, and when there is therefore cause to suppose that a cure is obtained, the discharge often returns, as I have already observed, with equal severity as at first, either from excess

cess in wine, or over exertion in bodily exercise. In such circumstances the injections must again be employed, and used with the same frequency as before, care being taken not to leave them off till some time after the running has disappeared again.

When the discharge returns repeatedly, the parts from whence it proceeds become so weak and relaxed, that a new disease thereby takes place, forming a variety of what in general is termed gleet. This, however, requires remedies of a different kind, and will fall to be considered in a different chapter.

It will be remarked, that excepting injections, I have only slightly taken notice of any other remedies: This I have purposely done, from a full conviction of the inefficacy of every remedy not immediately applied to the urethra, and from finding that a proper use of injections never fails to prove successful where a cure by any means can be obtained.

Where much pain and inflammation take place, I have observed above that some advantage may be obtained from blood-letting, conjoined with strict attention to an antiphlogistic regimen. I think it right, however, to say, that few cases occur in which this becomes necessary. A patient under Gonorrhœa should live moderately, but not upon such low diet as in former times was very generally prescribed. He should live in such a manner as may prevent the inflammatory symptoms from becoming severe, but not so low as to incur the risk of inducing relaxation or debility.

The circumstances which most particularly require attention are, abstinence from all manner of connection with women, and from bodily exertion, such as much walking and riding on horseback, which more especially affect the parts concerned in this disease.

Where no injections have been used, where the disease is either left entirely to nature,

nature, or treated with demulcents and purgatives only, a regular progress towards amendment is, for the most part, observed in the discharge. The matter from being thin, and of a greenish hue, or perhaps of a red colour from being tinged with blood, becomes of a thicker consistence, tough, ropy, and of a white or yellow colour: but where injections are employed this seldom happens. This natural process is thereby interrupted, and a cure often takes place without any change being perceived in the colour or consistence of the discharge.

Besides the usual symptoms of this stage of *Gonorrhœa*, we meet with others which occasionally take place in every stage of the disease, and which, some may suppose, ought to have been particularly noticed here, such as chordee, and evacuation of blood from the urethra. But these symptoms being attended with circumstances requiring a peculiarity of treatment quite unapplicable in the ordinary state of *Gonorrhœa*, and being all of them highly important,

important, a separate section will be allotted for the consideration of each. We shall now, therefore, proceed to consider the second stage of the disease.

SECTION V.

Of the Second Stage of Gonorrhœa.

IN this stage of the disease all the symptoms are more violent than in the first. The heat of urine is more severe; the whole body of the penis becomes tender, and even painful; and chordee takes place to a very distressful degree. The matter discharged from the urethra is either of an ugly green colour, or deeply tinged with blood, and commonly fœtid. On examination it is found to proceed from the higher parts of the urethra, generally from about the middle of the perineum, where the patient complains of a smart pain

pain upon pressure, and where one or more small tumors are often perceptible, produced by the inflammation having extended to Cowper's glands.

Although the symptoms of the first stage of *Gonorrhœa* are commonly distinctly marked, yet they frequently proceed to, and terminate in one of the other stages of the disease, particularly in that which we are now considering. This happens from the inflammation extending along the urethra, either from the matter being more than usually acrid; from improper management on the part of the patient; from the imprudent use of irritating or very astringent injections; or from the patient being of a habit of body rendering him particularly liable to be acted upon by causes apt to excite inflammation.

I conclude that it happens most frequently from the first and last of these causes, or, perhaps, from a combination of both; for, in a great proportion of cases, we find it taking place almost from the first day on which the running was perceived.

ceived. It must, no doubt, have fallen under the observation of every practitioner that this, as well as the third and fourth stages of Gonorrhœa, are often induced by the patient living in a state of riot and debauchery; and, in some cases, by the immoderate use of irritating injections. But although these are circumstances which in every case of Gonorrhœa should be rigidly guarded against, from their tending to excite one of the most distressful complaints to which the human body is liable; yet, from what I have mentioned, I am convinced, that the worst states of the disease would occasionally occur, notwithstanding of the most rigid abstinence, and of all that could be done either on the part of the patient or surgeon to prevent them.

As the practice in this state of Gonorrhœa is different from what I have advised in the first stage of it, to distinguish rightly between the two is a very important part of the practitioner's duty. In the first, the matter is, for the most part, discharged from within an inch and half

of the extremity of the penis; and where it happens to extend farther up the urethra, although the ardor urinæ may be considerable, yet the pain is not so severe as it always is in the second stage of the disease. In this last, the whole body of the penis, as I have observed above, is tender and painful; the chordee is highly distressful, and one or more inequalities, accompanied with pain on pressure, are discovered in the perineum: whereas, in the former, any chordee which takes place is for the most part moderate; the pain is never considerable, if it be not when the patient is passing water, and no hardness or inequalities are perceived in the perineum.

It is here proper to remark, that even in the second stage of the disease, these glandular tumefactions in the perineum are not always obvious at first; but on pressure with the fingers they are easily discovered, even on their commencement; and on longer continuance they become perceptible, not only to the touch but to
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the eye. Whenever the chordee is severe, the whole penis acquires much preternatural firmness and tension, particularly where it runs along the perineum. This, however, is very different from the glandular affections to which I allude: the one is a diffused swelling, extending over the whole, or a considerable part of the penis; it does not continue fixed or permanent, and it seems to depend upon a morbid irritability in the muscles of the penis, by which they are easily excited to violent and unequal contractions. The others are, at first, small, circumscribed, swellings, and painful to the touch: they do not rise and fall speedily, and they remain more or less permanent according as the symptoms with which they are connected are more or less violent.

These swellings proceed, as I have already observed, from an inflamed state of Cowper's glands, induced by the inflammation extending to the glands themselves along their ducts, which terminate in the urethra.

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As inflammation is in this situation apt to terminate in the same manner with high degrees of inflammation of other parts, in the formation of matter, and as this is apt to excite the most distressful consequences, nothing should be omitted that can tend to prevent it. When matter forms in these glands, if it be not immediately discharged by an external opening, it is very apt to burst into the urethra, and to produce a discharge, which, in some cases, does not terminate but with the life of the patient.

On the first approach, therefore, of this second stage of *Gonorrhœa*, all our endeavours should be employed to remove or lessen the inflammation. If the patient is plethoric he should lose a considerable quantity of blood with the lancet, and ten or a dozen leeches should be applied to the pained part. Whatever his habit of body may be, the application of leeches should not be omitted, and they should be repeated once and again, according to their effects, and to the degree of inflammation

mation and swelling which take place; saturnine poultices should be applied over the part affected; the bowels should be kept open with gentle laxatives, and the patient should be put upon a low diet.

If, either by the violence of the inflammation, or by an imprudent use of astringent injections, a stop has been put to the discharge, much advantage will be derived from our soliciting a return of it. This, however, must not be done with irritating applications, such as bougees, and stimulating injections, as some have advised, but it may be attempted with safety by throwing up, from time to time, injections of warm oil and other emollients, such as warm decoctions of lintseed and althea.

But although we find from experience that much harm is done by the application of stimulants directly to the urethra, yet we know that they may be applied to the skin both with safety and advantage. Thus, when the swelling does not soon lessen by blood-letting, and the other remedies

dies that I have mentioned, I have, in different instances, derived advantage from the application of blisters to the parts affected; and by covering the bites of the leeches with adhesive plaster, this may be done soon after they have been applied. The blister should be made to cover the whole perineum.

When the remedies that I have advised are timely and properly applied, they do not often fail to remove the inflammation; but when this is not accomplished, and when the tumours proceed to a state of suppuration, nature should be as much as possible assisted by a frequent and free use of emollient poultices and fomentations, and as soon as a fluctuation of matter is discovered, it should be discharged by making an opening the full length of the tumour. In this manner a sore will be produced that may be difficult to heal; but if the habit of body is sound, a cure will be obtained at last, and there is no other method with which I am

acquainted that will so readily prevent the matter from bursting into the urethra.

When this unfortunate circumstance takes place, of matter collected in one or more of these glands finding access to the urethra, scarcely any advantage is to be derived from art in the manner of treating it. Injections, as I had occasion to remark in the last section, instead of proving useful, rather do harm. They cannot reach the cavity of the gland, where alone they might answer a good purpose, and by preventing for a time that free discharge of matter, which, in every abscess is desirable, they cause it to collect, and alternately burst out, in greater quantities than before.

When the cause of this is not suspected, both the patient and practitioner are apt to imagine that it proceeds from the fault of the injection: every variety of the remedy is therefore employed, but nearly the same effect results from all of them, and the patient, after being teased and perplexed for a great length of time, finds himself

himself in no degree better than he was at first.

By some practitioners a course of mercury is advised in this state of the disease, especially frictions with mercurial ointment on the perineum; but although I have often known it fairly and completely tried, I never knew any advantage derived from it. Neither does mercury prove useful in the sores which ensue from opening abscesses in the perineum, arising from *Gonorrhœa*. On the idea of these sores being of the same nature with such as succeed to buboes in *Lues Venerea*, mercury is commonly prescribed; but although I have known it repeatedly used, not only for the cure of the sores, but for the discussion of the previous tumefaction of the glands, I never knew any advantage result from it.

All that in such circumstances can with propriety be done is, to cause the patient live in such a manner as will most effectually brace his constitution; his diet should be invigorating; cold bathing, par-

ticularly in the sea, proves sometimes useful, and, in some instances, Jesuit's bark is given with advantage.

In no period of this stage of Gonorrhœa are injections admissible, and I suspect that the discredit into which injections have fallen with many, has arisen from their being employed promiscuously in every state of the disease. We have just seen, that they cannot be used with any prospect of success when suppuration has actually taken place, and to every practitioner it must appear that they should not be advised while much inflammation continues: While the parts are inflamed, instead of endeavouring to remove the discharge, we ought rather to try to promote it. Nothing tends with more certainty to keep the symptoms moderate than the continuance of a plentiful discharge; and I have repeatedly observed that they all become more severe by whatever tends to lessen it: It is proper, therefore, that the younger part of the profession be put strictly on their guard against the use of injections in every

every period of this stage of *Gonorrhœa*; a practice which, in the first stage of the disease, is the only remedy, as we have seen, upon which any dependence should be placed, but which in this is evidently fraught with danger to the patient, and therefore with discredit to those who advise it.

Besides the glandular abscesses of these parts, which we have just been considering, collections of matter are apt to form in this state of the disease, not only in the cellular substance of the perineum, but in the corpus cavernosum of the penis, as well as in the corpus spongiosum urethræ. The treatment of these, however, corresponds so exactly with what has been pointed out for the others, that I have nothing farther to say upon it. To prevent, as much as possible, the risk of these collections bursting into the urethra, the matter should be discharged by a free opening the whole length of the tumour, as soon as it is found to be completely formed.

When collections of matter in this situation, whether seated in Cowper's glands, or in the contiguous soft parts, terminate, as they sometimes do, in external openings, at the same time that a communication is formed with the urethra, the urine escapes at the fore, and thus another disease is produced, termed a sinus, or fistula in perineo. This falls to be treated like sinuses in every other part: the seat of the abscess must be laid open from one end to the other, and by enlarging the opening in the urethra, if the patient be otherwise in sound health, a cure will, for the most part, be obtained, by endeavouring to heal the sore from the bottom in the usual way*.

It may be alleged, if this proves successful where the matter has already formed an opening, both inwardly and outwardly, for itself, that a similar practice should be adopted where the abscess has only burst into the urethra; that a free incision

* Vide System of Surgery by Benjamin Bell, chap. xxxiii.

incision should be made into it, and a cure attempted in the manner I have already advised.

Where the opening into the urethra is such as to admit the urine to pass to the abscess, the practice to which I allude ought undoubtedly to be adopted, for no other will prove successful, and the patient must remain in a state of great distress and misery while this communication remains ; but while the external teguments remain entire ; while the urine does not find access to the abscess ; and while the pain arising from it is inconsiderable, no attempt of this kind should be made. However inconvenient the discharge of matter from the urethra may be, and however long it may continue, the patient should rather submit to it, than to the uncertain event of an opening in the perineum, which always proves tedious and distressful, with whatever judgment it may be treated.



SECTION VI.

Of the Third Stage of Gonorrhœa Virulenta.

IN this stage of Gonorrhœa, along with ardor urinæ, and the other ordinary symptoms of the disease, the patient complains of a severe fixed pain in the upper part of the perineum, accompanied with a sensation of fulness and tension in all the parts contiguous to the anus. The desire to void urine is more frequent than in either of the two preceding states, and it is commonly passed with much pain and difficulty; often drop by drop. Tenesmus, or a painful and frequent desire to go to stool, often takes place: in some instances, to such a distressful height as to render the patient perfectly miserable.

Even in the commencement of the disease the pain in passing water is in some cases so severe as to excite heat and other symptoms

symptoms of fever; and, as it advances farther, I have known the fever become very alarming. This state of *Gonorrhœa* proceeds, in some instances, from the inflammation spreading backward in a gradual manner from the point of the penis, which I have shewn to be the seat of the first stage of the disease; but more frequently it takes place suddenly, either from the imprudent use of injections, from the patient being in a riotous course of life, or from his being exposed to violent exercise, either on foot or horseback.

On examining the parts affected, the penis, for the most part, is found to be in a state of tenderness and irritability, nearly indeed, as I have described it to be in the second stage of the disease; but, together with this, on compressing the parts about the end of the rectum, a sense of pain is experienced, which does not happen in either of the states that I have described, and on passing the finger into the anus, the prostate gland is found enlarged, and in such

such a state of irritability that it can scarcely bear to be touched.

Even the slightest degree of this stage of Gonorrhœa excites much uneasiness, and the desire to pass water seldom ceases for above a few minutes together; but whenever it has been of long duration, the prostate gland, which nearly surrounds the urethra, or which rather appears, as it were, to form the passage of urine at this part, becomes often so much swelled as nearly to obstruct the discharge of urine as completely as when the urethra is entirely stopped. Those, indeed, who are not versant in this branch of practice are apt to mistake this affection for strictures in the urethra; of course a delay takes place in using the proper remedies, and attempts which are frequently made to overcome the supposed strictures, too often do mischief. Frequently, indeed, neither a bougie, nor catheter, when employed for removing a suppression of urine proceeding from this cause, can be passed; for the prostate gland is in some cases so much swelled

swelled as to obliterate the passage almost entirely, and in others, by swelling on one side only, the passage is thrown altogether over to the other; circumstances which render the introduction of a bougie either impracticable, or at best difficult and uncertain.

As it is in the commencement only of this symptom that any material advantage is derived from the interference of art, and as the disease excites in its more advanced states the greatest possible distress, we ought instantly on the first approach of it, to apply such remedies as experience has shewn to prove most effectual.

Of all the remedies that I have ever employed, early blood-letting is that from which the most obvious advantage has been derived. It should be advised immediately on the first approach of pain, nor should we be deterred by a weakly or delicate constitution. In a person of this description the evacuation ought, no doubt, to be more sparingly practised than where plethora takes place; but even in
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the most delicate habit of body, a quantity of blood should be discharged in proportion to the strength of the patient; in the first place by the lancet, and afterwards by the application of leeches to the parts affected. The practice of blood-letting I consider to be equally necessary here as in cases of pleurisy: in the latter, indeed, the life of the patient is in greater hazard, but in this his future comfort and enjoyment of life are at stake. It ought not, therefore, in any instance, to be omitted.

Of this I speak the more decidedly from various instances having fallen within my observation, of the most distressful consequences having ensued from the omission of this remedy, and from others having ended easily where blood-letting was with freedom employed. It is in the first stages only of the disease, however, in which it acts with advantage; chiefly, indeed, on the first symptoms of inflammation taking place, for when the prostate gland becomes inflamed and swelled in any considerable

derable degree, neither this nor any other remedy can be depended upon for a cure. After much time has elapsed an enlarged prostate will sometimes be found diminished, but this happens more frequently from attention to regimen alone, and without our being able to account for it, than as a necessary consequence of any medicine that we employ.

Blisters do not afford that relief here that we sometimes derive from them in swellings of Cowper's glands, but in various instances I have derived advantage from deep seated issues: I will not say that I have ever known a cure completely accomplished by any remedy whatever, where the prostate gland has been much hardened and enlarged; but no remedy that I have employed for the removal of this very distressful and obstinate disease has ever proved so useful as a pea issue on each side of the rapha perinei, and the more deeply the pease are inserted, the more useful they commonly prove:

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For the removal of pain and irritation, opium, whether given by the mouth, or in clysters, proves always our most certain remedy ; but probably from coming more directly in contact with the diseased parts, it proves evidently most successful when given in clysters, and it seems to answer better in small doses, frequently repeated, than in larger quantities given at once. Thirty drops of laudanum, mixed with two ounces of thin starch, and thrown easily into the rectum, very commonly gives immediate relief, and as long as this dose proves effectual it ought not to be increased.

While opiates, given in this manner, lessen the irritability of the organs of urine, they also give much relief by removing that painful and frequent desire to go to stool, with which patients in this disease are often severely afflicted.

Hitherto I have said nothing of the use of injections, which are frequently employed in this, as in other stages of Gonorrhoea, for removing the discharge.

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This, however, is a practice that ought not to be adopted. In the second stage of Gonorrhœa I had occasion to remark, that the discharge, instead of being stopped, ought rather to be encouraged. The same observation applies still more forcibly here, where a stoppage of the discharge tends always to aggravate every symptom, and where we find that relief is often obtained by our bringing on a return of it. This, as I observed in the last section, should rather be done by the use of warm emollient injections, than by such as stimulate and give pain. These last, I know, are often advised for this purpose, but as I have known them evidently do much harm, even when managed in the most cautious manner, and as we find, indeed, that this stage of the disease is often at first induced by this very practice, I do not hesitate to say that it ought very universally to be laid aside. For a similar reason bougies ought never to be employed in this stage of Gonorrhœa.

Emollient

Emollient injections prove useful not merely by soliciting a more plentiful discharge from the urethra, but by soothing the irritability in the parts affected, and thus lessening the pain; and where opiates are conjoined with emollients they act still more powerfully in this manner. An infusion of the heads of poppies and althea root, used warm, answers particularly well for this purpose. Warm poultices, applied externally over the fundament and perineum, also prove useful. Some advantage too is derived from warm fomentations; and I have known the warm bath afford much relief.

All these remedies, however, act only as palliatives; but when duly persisted in, they seldom fail to lessen the severity of the distress, while nature, in the course of time, aided by cautious management on the part of the patient, may at last remove the pain. At least, this, in the course of my observation, has happened in several instances where the swelling of this gland has not arrived at any great height;

height ; but more frequently, I must again observe, as the consequence of rigid attention to regimen than the effect of medicines. We constantly find, in this stage of *Gonorrhœa*, that whatever excites much heat of body does harm ; whether bodily exercise, or heating food and drink : hence every thing of this kind should be avoided, particularly much walking and riding on horseback ; and full meals of animal food, especially when wine or other strong drinks are likewise indulged in. The diet should consist almost entirely of milk and vegetables, with no greater proportion of animal food than is necessary to support a very moderate degree of strength.

Such drinks should be chiefly used as tend to blunt the acrimony of the urine, and to sheath the parts which it passes over ; such as infusions of lintseed and althea, emulsions of almonds, and water in which gum arabic is dissolved.

Having insinuated that I have little confidence in the activity of any medicine

for the removal of swellings of the prostate gland, a deference to the opinion of others requires that I should state the grounds upon which this opinion is formed; this I shall do in noticing shortly the medicines which have been employed with the view of obviating this symptom.

When other remedies fail, and in some cases even before they are fairly tried, mercury is, in common practice, recommended; but I have much reason to think that it very commonly, if not always, does harm.

Even in early practice I had frequent opportunities of seeing this stage of Gonorrhœa, and being led by conversation with others to expect substantial relief from mercury, I used it freely for many years: I must acknowledge, however, that I never perceived any advantage arise from it, while, in some cases, evident mischief ensued from it.

Mercury never had any obvious effect in diminishing the tumour, and by increasing the irritability of the system, even
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when given in small quantities, and in the most cautious manner, it usually rendered the diseased parts more painful than they were before. On these accounts mercury appears to be not only an useless but a hazardous remedy, so that I have now, in swellings of this gland, laid it entirely aside.

Cicuta has also been much recommended in swellings of the prostate gland; but although I have given it very full and complete trials, I am not sure that in any instance it ever proved useful. The disease, in some; has appeared to get better while cicuta was employed, but this was only where a great length of time had elapsed, and not in a greater proportion of cases than where this remedy was never used. But as it may be employed under proper management, without any risk to the patient, where other remedies do not succeed, and where it is necessary to be doing something, it may be proper to give it a farther trial before any final opinion is formed of it.

Having, in tumours of other parts, observed obvious advantages from a decoction of the root of mezereon, I have, in various instances, used it in swellings of the prostate gland. In some it has appeared to prove useful, but never so evidently as to enable me to speak with certainty about it. When conjoined with sarsaparilla*, it seems, in other cases, to be rendered still more active, and the mucilage contained in that root, by blunting the acrimony of the mezereon, renders it both more agreeable to the palate and more grateful to the stomach.

Among other remedies that are employed in swellings of the prostate gland sea bathing and drinking sea water has been one of the most frequent. Where the disease of the gland is connected with a scrophulous constitution this remedy certainly proves useful. It will never remove the tumour speedily; but, by strengthening the constitution, it seems, in

* Vide Appendix, No. 45.

in such circumstances, to render the swelling less permanent than it usually is where this remedy is not employed. It ought, however, to be remarked, that all strong purgatives do harm. This happens in every stage of *Gonorrhœa*, but especially where the prostate gland or bladder are affected. By the irritation which they excite they not only induce a more copious discharge, but render the inclination to void urine much more frequent and more painful. When salt water is used, therefore, it ought not to be in greater quantities than to answer as a gentle laxative.

Swellings of the prostate gland do not usually terminate in suppuration, as frequently happens with tumours of the glands of the urethra. When Cowper's glands, or any of the smaller glands of the urethra become inflamed, they either suppurate or a cure is obtained by discussion: but, in similar affections of the prostate this rarely happens. When the tumour does not yield to timeous blood-

letting, or when it does not afterwards gradually subside, it either remains nearly of the same size and hardness, or it becomes both larger and firmer till it ends in a real schirrus, of considerable bulk.

In this state of the disease the discharge is, for the most part, thin and acrid; together with matter from the contiguous parts of the urethra, which are usually more or less diseased, a considerable quantity is thrown out from the gland itself, forming, as we shall afterwards see, one of the most obstinate varieties of gleet.

Even in the commencement of this affection of the prostate, the passage of urine, as I have already remarked, is often much obstructed; but, in the more advanced stages of the disease, this cause of obstruction comes, in some cases, to such a height as to be unsurmountable. Whether from the passage being completely obliterated, by the sides of the swelled gland adhering together, of which I have now met with two instances, or from the passage being contracted by the sides of the gland swelling unequally,

ly, it sometimes happens that neither a bougie nor catheter can be introduced. In this case, as a total obstruction is formed to the passage of urine, we are obliged to draw it off by puncturing the bladder, which may either be done above the pubes, or by passing the trocar into the bladder from the rectum, or pushing it up by the side of the diseased gland *. It must be remarked, however, in forming an opening with a trocar for drawing the urine off from the bladder, that a very enlarged state of this gland precludes every attempt for this purpose either in the perineum or rectum. In which case it must necessarily be done above the pubes.

In such circumstances, all that art can do, is to preserve a passage for the urine, by retaining a canula in the opening, and keeping the patient as free from pain as possible with doses of opium adequate to the distress in which he happens to be.

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* Vide System of Surgery by Benjamin Bell, chap. xxxi.

SECTION VII.

Of the Fourth Stage of Gonorrhœa.

IT sometimes happens in Gonorrhœa that the inflammation passes easily over the anterior part of the urethra, and shews itself in more force and violence higher in the passage. Thus, although the third stage of the disease, in which, as we have seen, the prostate gland is chiefly affected, is sometimes produced by the inflammation spreading from those parts which are only concerned when the second stage of it takes place, yet instances often occur of the inflammation passing from the point of the urethra, and fixing at once, in the most violent manner, upon the prostate gland or bladder, without any of the intermediate parts having

ving been attacked. In some cases the prostate is affected while the bladder itself remains sound, while in others it passes easily over that gland, and seizes with much violence upon every part of the bladder.

In some the bladder becomes inflamed almost on the first attack of the disease. The inflammation spreads so quickly along the urethra, that the bladder is pained in the course of a few hours from the commencement of the discharge. This, however, happens more frequently after the running has been of some duration, and, for the most part, it can be traced as the consequence of much exposure to cold and dampness; of violent exertion in walking or on horseback, or, as the effect of an injection thrown with too much violence into the upper part of the urethra.

The patient, on the first approach of this symptom, complains of much uneasiness over all the region of the bladder, particularly about the neck of it; accompanied

accompanied with a frequent and painful desire to make water, and often with tenesmus. In some cases the pain is chiefly seated about the anus, but, in general, all the under parts of the abdomen are affected, particularly those about the pubes, and, in some instances, even the kidneys become pained, either from nervous sympathy, or from the inflammation spreading from the bladder along the ureters.

In general, the pain, especially after voiding urine, extends to the glans penis, and as this, with the stoppage which occurs to the flow of urine, are symptoms which always accompany stone, cases of this kind, when the history of the disease has been concealed, have been mistaken for stone in the bladder.

If the discharge has not been stopped by injections, it continues as if no affection of the bladder had taken place; and, any interruption that occurs to it proves only temporary; but along with the usual discharge from the urethra, such as takes place in one or other of the different stages

stages of the disease that I have described, a considerable quantity of matter passes off with the urine. This gives the urine a turbid appearance, as if purulent matter was mixed with it, but on examining the deposition, which it usually makes in the course of a few hours, it is found to consist almost entirely of mucus.

On a further continuance of the disease, this matter contained in the urine assumes a very different appearance. Instead of being broken and divided into flakes as it was at first, it now becomes tough and viscid in a very remarkable degree, resembling isinglas diluted with water to the consistence of jelly. This gelatinous matter is suspended in the urine when first voided, but it soon separates, and falls to the bottom, where it adheres so firmly to the sides of the pot, as to be separated from it with difficulty. In some cases this substance is clear and transparent, in others it is tinged of a yellow hue, and somewhat opaque.

When

When much of this matter has passed off, the patient is commonly relieved, and continues easy for a longer or shorter period according to the degree of inflammation that takes place.

In some cases the quantity of this viscid matter is not considerable, being no more than what slightly covers the bottom of the pot, while in others it seems to form more than one half of all that comes from the bladder. When in such considerable quantities, it tends greatly to reduce the strength of the patient, inasmuch that few constitutions are able to bear it long.

From the nature of the parts in which this disease is seated, we would expect that it should be the most formidable symptom that Gonorrhœa could induce. This, however, is not the case: the disease described in the last section, swelling of the prostate gland, proves always more so. Few recover from the one, while cures are often obtained in the other. At least this is the most frequent result where the
disease

disease has not been much neglected at first. In general, indeed, a great length of time passes over before a cure is obtained; nay, some degree of uneasiness, and certain deranged sensations, often continue for a number of years, but after the first violence of the symptoms is over, they generally, in a gradual manner, become milder, till at last they vanish entirely.

On the first approach of the disease, blood-letting is the remedy upon which most dependence should be placed, and, when freely practised, it seldom fails to render the symptoms moderate and of shorter duration.

Blood should be taken with the lancet in quantity proportioned to the strength of the patient, and a number of leeches should be repeatedly applied near to the anus. The diet should be the same as has been advised in the last section. The bowels should be kept moderately open with castor oil, or other gentle laxatives, and opiates should be given in sufficient doses for lessening, or even for removing

moving the pain. When speaking of swelling of the prostate gland, I advised opiates to be given in the form of clysters, rather than by the mouth, and this mode of exhibiting the remedy proves equally useful here.

With a view more certainly to allay the irritability of the bladder, it has been proposed to inject opium, dissolved in water, into it : but this appears to be a dangerous experiment. I have known it done, but it nearly killed the patient. Convulsions and other alarming symptoms were induced, but not in such a degree as to prove fatal.

Warm emollient injections, such as warm oil, or the form of injection in the Appendix, No. 23, frequently relieve the pain, and give a temporary suspension of that constant desire to pass water, which often prevails here; and in some cases the semicupium proves successful when these have failed.

A plentiful use of mucilaginous drink, such as infusion of lintseed and althea
root,

root, and a solution of gum arabic in water, afford relief in all diseases of the urinary passages, and in none more than in this.

All these remedies are meant to alleviate pain and irritation in the commencement of the disease, and when timeously applied, and duly persisted in, they very commonly answer the purpose; but in the more advanced stages of the disease, when the pain is not so acute, but when much irritation prevails, accompanied with a discharge of the viscid matter that I have described, remedies of this class afford little or no relief. Opiates will at all times indeed allay the irritation, but blood-letting, which at first never fails to prove useful, tends now only to weaken the patient, while it does not in any degree lessen the violence of any of the symptoms.

In this situation a liberal use of Jesuit's bark sometimes acts with advantage; and the addition of a few grains of allum to each dose in some instances renders it more effectual

effectual. Balsam of copaiba, and Canada balsam, prove likewise useful; but where much benefit is expected from remedies of this class, they should be given in larger doses than are commonly prescribed: The quantity indeed should only be restricted by the state of the stomach; for they are so harmless, that they may at all times be given in as large doses as the stomach will retain.

Of all the remedies, however, which in such circumstances I have ever tried, uva ursi is the most effectual. No advantage is derived from it where the prostate gland is diseased; but in unmixed affections of this class, where the bladder only is affected, it seldom fails to procure relief. It may at first be given to the quantity of twenty grains, and afterwards in doses of half a drachm of the powder three times a-day, in which way it seldom fails, in the course of a short time, to lessen the proportion of viscid matter in the urine; by which, and by the abatement of pain which at the same time takes place, we are
always

always certain that the inflammation is diminished.

On the idea that this disease of the bladder proceeds from a translation of the matter of *Lues Venerea* from the urethra, mercury is commonly used in it; but although I have often given it, no advantage has ever been derived from it: it sometimes even does harm. It tends greatly to increase the irritability of the system, as well as of the parts more particularly affected.

When the disease has been of long duration, the bladder is apt to become much thickened and lessened in diameter: hence, even after all the other symptoms are gone, the frequent inclination to pass urine continues. In some cases, this goes on for years; nay, I have known it endure for a great length of time, and only terminate with the life of the patient. It seems evidently to be the effect of inflammation, for it succeeds to inflammation of the bladder by whatever cause it may be induced. It also occurs from strictures in

the urethra, when they happen to be considerable and of long duration.

For the removal of this thickened state of the bladder mercury is often prescribed, and in some cases it has certainly proved useful; but it seems to prove equally so from whatever cause the disease may at first have arisen*: It always does harm, however, while the parts continue in a state of irritability, so that in this situation it should never be given.

In this irritable state of the bladder, if a plentiful exhibition of uva ursi does not soon prove effectual, opium, in the form of glysters, should be advised: By lessening the desire to pass urine, it soon gives relief; and I have known it prove completely successful at last, when every other

* This practice of giving mercury in the thickened state of the urinary bladder, which succeeds to inflammation, we find recommended by the late Doctor Ebenezer Gilchrist of Dumfries, to whom we are indebted for much valuable information in different parts of the practice of medicine.

other remedy had previously been tried in vain.

In some cases, where opium, by inducing obstinate costiveness, has not been adviseable, I have derived much advantage from a liberal use of hyoscyamus: It requires, however, to be given in larger doses than are usually prescribed. The quantity of eight or ten grains of the extract may with safety be given to an adult even at first; in course of time to be increased to fifteen, twenty, twenty-five grains, or even to half a drachm.

SECTION VIII.

Of Chordee.

CHORDEE is a painful, involuntary erection of the penis. Patients in every stage of Gonorrhœa are, in some degree, liable to Chordee; but it occurs more frequently, and to a much greater height in the second stage of the disease, than in any of the others. It is most frequent when the patient is warm in bed, when in some instances it is so severe as to deprive him entirely of rest. During a fit of Chordee, the penis becomes hard and painful to the touch, and for the most part it is curved downwards in a considerable degree.

Chordee takes place in every period of this stage of Gonorrhœa, and it sometimes continues after the heat of urine and all the other symptoms are gone, but it is usually

usually most severe during the continuance of the inflammation, and more or less so according as that symptom is in a greater or lesser degree.

I therefore conclude that Chordee is an effect of inflammation, and that it proceeds from irritation, communicated from the nerves of the urethra to those of the contiguous muscles, by which those unequal degrees of contraction are produced over the whole substance of the penis which universally take place in this symptom of the disease.

Were it owing to effusions of lymph into the reticular parts of the penis, as some have imagined *, Chordee would be of a more permanent nature than we ever find it to be, and these effusions would be apt to terminate in suppuration. Now, although suppuration is sometimes the consequence of inflammatory tumours in these parts, I have never known it happen in those tumefactions which accompany Chordee. The latter commonly rise and

L 3 disappear

* Vide John Hunter on the Venereal Disease.

disappear again in the course of a few hours, and they are more diffused than tumours usually are which proceed to suppuration. The others rise more slowly, and they terminate, whether by dispersion or suppuration, in a much more gradual manner.

Of all the remedies that I have ever employed opiates prove most useful in Chordee. The pain and tension are sometimes removed by rubbing the parts affected with laudanum, or with a strong solution of opium in water, and by keeping pledgits immersed in either of these, constantly applied to them; but more advantage is obtained from the internal exhibition of opium. Thirty or forty drops of laudanum, given at bed-time, or on the accession of Chordee, very seldom fail to prevent or remove it.

Emollient injections thrown into the urethra, particularly when impregnated with opium, have also a powerful influence in lessening the violence of Chordee; and as the heat and irritation which coarseness

ness always excites tends greatly to augment the severity of this symptom, we often find it relieved by the operation of a laxative.

A temporary relief is often derived from the application of a cold solution of saccharum saturni, and I have known the external application of camphor prove serviceable: when dissolved in spirit of wine it proves useful, but it acts with more advantage when dissolved in oil. Frictions with mercurial ointment have been much recommended for the removal of Chordee, but as I have commonly derived more advantage from the use of camphorated oil, I conclude that it is chiefly the emollient properties of the mercurial ointment which render it useful, and, therefore, the inconveniencies which sometimes arise from mercury, may here be avoided.

In some cases we derive advantage from tying the penis down with a fillet to the thigh, but this only answers where the symptoms are mild, nor should it ever be

advised in the more severe attacks of the disease. Being an obvious remedy for counteracting an erection, it is not unfrequently employed in the first instance by the patient; but I have frequently known it do harm, either from the fillet being applied too tight, or from the parts being in such a state of tenderness as to render it altogether inadmissible.

When none of these remedies succeed, blood-letting sometimes proves useful; particularly the application of leeches to the parts affected, nor ought this ever to be omitted when the patient is of a plethoric habit, or when the pulse is full. When Chordee takes place in a slight degree only, blood-letting is never necessary; but whenever it is severe, and resists the other remedies that I have mentioned, we ought never to hesitate in advising it. Blood-letting proves more effectual than any other remedy in preventing that permanent kind of Chordee, which sometimes proves distressful long after every other

other symptom of Gonorrhœa has disappeared.

Opium, as I have already observed, is one of our most effectual remedies in every stage of Chordee, but particularly where it has been of long duration. In this state of the disease I have sometimes found, where opium has failed, that ben-bane, as I have already advised, the *hyoscyamus niger* of Linnæus, has proved useful. Ten grains of the extract, properly prepared, should be given two or three times a-day at first, and the dose increased to fifteen, twenty, or more grains, according to its effects. I have given it to the extent of thirty grains three times a-day, with no inconvenience whatever; but this was after the patient had been for some weeks accustomed to take it.

I believe, indeed, as I have already observed, that we commonly err in giving too small doses of *hyoscyamus*, and that more benefit would ensue from it, were it given in larger quantities.

SECTION IX.

Of Hemorrhages from the Urethra.

IN the description of the disease, we have seen that the matter of Gonorrhœa is frequently tinged with blood. When the quantity of blood is inconsiderable, little or no notice is taken of it; the matter gradually acquires the common appearance, and a cure is accomplished in the usual way; but when a blood-vessel of any magnitude bursts in the urethra, as sometimes happens when the inflammation runs high, such quantities of blood are discharged as prove highly alarming. I have known different instances of three or four pounds of blood being discharged from the urethra in the space of a few hours.

On the first appearance of this symptom complete rest should be advised, for
nothing

nothing tends more to promote hæmorrhages of every kind, particularly those from the penis, than bodily exertion. The patient's bowels should be opened with a gentle laxative; his diet should be of a cooling nature; he should be kept in a cool, well-aired apartment, and the penis should be immersed, from time to time, in a cold solution of saccharum saturni, in equal parts of vinegar and water.

In Hæmorrhages of every kind I have derived much advantage from a plentiful use of kino, and particularly in the symptom which we are now considering. It may be given in the quantity of twenty grains four times a-day, either by itself or rubbed with equal parts of gum arabic and fine sugar, which renders it both more palatable and more grateful to the stomach.

In some cases astringent injections prove useful; particularly infusions of red rose leaves, impregnated with allum, as in No. 21, and No. 14*, of which balsamum

* *Vide Appendix.*

samum copaiba forms the basis. The injections should be thrown up with caution, and retained by compressing the urethra as long as the patient can bear them.

When all these means prove unsuccessful, and when there is cause to suspect that the patient's life may be endangered by the loss of too much blood, recourse must be had to pressure. I have, in different instances, put an immediate stop to the discharge, by inserting a bougie into the penis. When the bougie is large nothing farther is necessary; but when it does not prove successful of itself, if the discharge proceeds from the fore-part of the penis, it may be stopped at once by gentle pressure with a narrow roller; and when it flows from the perineum, pressure with the hand or fingers should be preferred.

With a view to obtain a long continued pressure, a catheter of elastic gum may be used instead of a bougie, by which the patient, with due care and attention, may void his urine while the pressure is continued:

tinued: but if the bladder is emptied immediately before the bougie is introduced, it may, for the most part, be retained as long as is necessary.

Having in this and the preceding sections considered Gonorrhœa in the different forms under which it occurs in men, I shall now offer a few observations upon the same disease as it appears in females.

SECTION X.

Of Gonorrhœa in Women.

WOMEN are less susceptible of Gonorrhœa than men; and with them it is also less violent in its symptoms, and less alarming in its consequences.

Why men should be more readily infected than women is difficult to explain; but that the disease should prove more violent in men is evident. The parts which

which it attacks are more numerous, and more deeply seated; and we find that all the symptoms of the disease are mild or severe, according as the parts affected are deeply seated, or otherwise. Hence, as long as the extremity of the urethra only is affected, the symptoms of Gonorrhœa are equally violent in both sexes. During the continuance of the first stage of the disease in men, the pain is never more severe than we often meet with it in women, nor does it ever become so till the inflammation proceeds to a greater depth.

In women the discharge proceeds either from the vagina or urethra, and in some cases, partly from both. When the vagina only is affected, the pain is inconsiderable, unless the matter is so acrid as to inflame the clitoris, nymphæ, or labia pudendi, as we sometimes find is the case; but whenever the urethra is the seat of the disease, the same degree of ardor urinæ takes place as usually happens in men. Nay, in women this symptom is often more severe,

vere, and the inflammation proceeds more readily and more frequently in them to the bladder, than it usually does in men; for, in most instances of Gonorrhœa in women, they complain of severe pain over the loins, and all the region of the bladder, and their urine very commonly deposits mucus in such quantities as indicates a considerable affection of that organ.

This must happen from the passage to the bladder being considerably shorter in them than in men; and the urethra being wider, and not so liable to be obstructed, the symptoms arising from affections of this part are neither so severe, nor are they usually of such long continuance.

On examining the seat of Gonorrhœa in women, it is often difficult to determine whether the disease exists or not, and if the patient is inclined to conceal any circumstances connected with her situation, it is altogether impossible to ascertain this point with precision. This uncertainty often occurs from the similarity of Gonorrhœa to the matter of fluor albus,

albus, a disease to which women are so very liable, that in some degree, scarcely any but the most robust are at all times free of it. Besides a similarity in the matter, the heat of urine, and inflammation of the contiguous parts, are often equally severe in the fluor albus as they commonly are in Gonorrhœa.

The chief distinction which external appearances afford between the two diseases, is, that in fluor albus the matter is of a whiter colour than in Gonorrhœa. In the latter, it is somewhat of a cream colour, whereas in fluor albus it is usually pale and white, and of a thinner consistence. It must, however, be acknowledged, that these means of distinction are by no means sufficient, and that no certainty with regard to it can be obtained, but by a full account being received from the patient herself of all the circumstances connected with her situation. When a woman is seized with heat of urine, and a discharge of matter from the parts of generation, and at the same time admits that these symp-

toms

toms succeeded to her connection with a man labouring under Gonorrhœa, no doubt will remain of the nature of the disease: but, when a patient inclines to conceal the real cause of her disease, no means with which we are yet acquainted are sufficient to ascertain the difference between fluor albus and Gonorrhœa.

It fortunately however, happens, that the remedy which answers with most certainty in the one, proves equally powerful in the other: the remedy to which I allude is an astringent injection. All the variety of injections enumerated in the foregoing sections may be used with equal propriety here: but it is chiefly the vitriolic solution, No. 18, upon which much dependence should be placed. When duly persisted in, and thrown up five or six times a-day, it seldom fails, in women, to accomplish a cure of Gonorrhœa, and it proves equally successful, as I have observed above, in removing the fluor albus.

Where, indeed, the constitution is much debilitated, and where the discharge is kept up by general relaxation of the constitution, although injections may remove the running, they will not prevent a return of it; but from much experience of their influence I can recommend them as the most powerful remedy that has yet been employed for this very distressful symptom, to which a great proportion of females are liable.

When the discharge proceeds from the vagina injections may be used with much freedom; but in throwing them into the urethra more circumspection is required even than in men. The urethra in women being short, and the sphincter of the bladder more easily forced, if injections are thrown up with violence they readily pass into the bladder; and as this might be productive of much irritation and pain, it ought to be carefully guarded against. With proper attention this is easily done; and as the running proceeds, for the most part, from within half an inch of the extremity

tremity of the urethra, there is no necessity for throwing injections farther.

Where the disease is entirely confined to the urethra or vagina, a cure may always be accomplished by injections; particularly if at the same time due attention is given to diet, and to the state of the bowels: but where the bladder is already diseased, other remedies are required. The patient must lose blood in quantities proportioned to her strength; her diet should be low; her bowels should be kept easy with gentle laxatives; and the pain and irritation should be lessened or removed with doses of opiates proportioned to the violence of these symptoms.

In women the mucous glands of the parts affected are apt to inflame, although not so frequently as in men, nor are the consequences which result from them so apt to prove permanent. This may happen from none of these glands being so large in women: hence, when they swell from inflammation, they do not arrive at such a bulk, and when they suppurate, the

abscesses which ensue more easily heal. They are chiefly seated in the labia pudendi and vagina.

Swellings of this description in women require the same method of treatment as in men. Blood-letting, both general and local, should be advised on the first appearance of the tumours, and the parts affected should be kept covered with a cold solution of saccharum saturni in water and vinegar. When this fails in preventing their increase, warm emollient cataplasms should be advised, in order to forward suppuration; and this taking place, the tumour should be opened by a free incision from one end to the other.

Where these tumours arrive at a larger size than usual, I have, in different instances, both in men and women, discharged the matter by the introduction of a seton. But as setons are not in this situation easily managed, the mode of opening them by incision should be preferred; and it will commonly be found that we succeed best by

by laying the abscess open through its whole length.

In the treatment of Gonorrhœa in females some uniformly prescribe mercury, although they never advise it in men. This they do from an idea of its being more frequently connected with Lues Venerea in women than in men.

I have not found, however, that this is the case, or that there is cause for mercury being given for this disease in women more than in men. Gonorrhœa often takes place in women as it does in men, along with Lues Venerea: in such circumstances mercury must no doubt be employed; but by no means on account of the Gonorrhœa. So far as my observation goes, the disease is to be cured in both sexes in the same manner, chiefly, as I have already remarked, by the use of astringent injections.

It happens, indeed, in women, as it also does in men, that Gonorrhœa, particularly the milder forms of the disease, will disappear whether injections are used or

not. This, in former times, was attributed to the purgative, demulcent, and astringent medicines, which in every instance of the disease were used in large quantities ; but by later experience we know that none of these remedies are necessary, and that the disease disappears as soon, and with as much certainty, where none of them are employed, merely by keeping the parts clean, with a due attention to regimen.

In speaking of cleanliness, it is proper to remark, that both in men and women it ought at all times to be inculcated, particularly in women, in whom the matter of *Gonorrhœa* is apt to become acrid, and to excoriate the parts to which it is applied.

Attention to this circumstance is often advised on the supposition of chancres being likely to occur from the matter of *Gonorrhœa* being allowed to rest long upon any particular spot. Whatever excites attention to cleanliness is always proper ; but no practitioner of observation

tion will now admit, that cleanliness in Gonorrhœa proves useful by preventing chancres. Were this the case, excoriations produced by Gonorrhœa would not heal but with the use of mercury; whereas we all know, that they never require mercury, and that they heal easily merely by bathing the parts frequently, and preventing the matter from resting upon them in future. When bathing in water alone does not succeed, a weak solution of saccharum saturni or cerussa acetata, will sometimes answer, in the proportion of a grain to an ounce of distilled water.

SECTION XI.

Recapitulation.

I HAVE thus finished the observations that I meant to offer upon Gonorrhœa as it appears both in the male and female patient; but it may not be improper in

this place, by a short and general recapitulation, to bring all that I have said into one point of view.

1. From the arguments that I have stated in the preceding sections, it appears that Gonorrhœa is a local disease, proceeding from a specific contagion, and not necessarily connected with any other.

2. That the discharge of matter in Gonorrhœa is not the effect of ulceration, but proceeds from an inflamed state of the urethra and contiguous parts.

3. That this inflammation, while confined to the membrane of the urethra, particularly to the parts near to the extremity of the penis, never excites any alarming symptom: a discharge of matter, accompanied with ardor urinæ, and some slight degree of Chordee, being almost the only symptoms that take place.

4. The

4. That the disease is always formidable in proportion to the depth of parts that are affected, the symptoms being more or less violent, and productive of more or less hazard, according as the inflammation has reached to Cowper's glands, the prostate gland, or to the bladder.

5. That in the cure of Gonorrhœa no advantage is derived from mercury or any remedy acting entirely on the constitution. The disease being local no medicine proves useful but such as acts directly upon the parts affected.

6. That where the membrane of the urethra alone is affected, no remedy proves so successful as astringent injections*.

7. That these injections, in order to act with safety and advantage, must be thrown up with much caution, and repeated from
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* Vide Numbers 18. and 19. in the Appendix.

fix to eight or ten times a day, at the commencement of the disease; less frequently as the discharge lessens, and at last, in a gradual manner, laid entirely aside.

8. But although injections of this description may be used with safety where the membrane of the urethra only is affected, they are never employed but with much risk of doing harm where the inflammation has reached to Cowper's glands, to the prostate gland, or to the bladder.

9. That the greatest attention is therefore required in distinguishing between the different stages of Gonorrhœa; the want of this, having, with some practitioners, brought the use of injections into discredit, when the fault did not lie in the remedy, but in the improper mode of applying it.

10. That in all states of Gonorrhœa, where the inflammation has gone farther than the membrane of the urethra, instead

of wishing to remove the discharge, we should rather endeavour to solicit a greater flow of it; the running, in such circumstances, being only a secondary object when compared with the consequences that ensue from inflammation proceeding to a great height. For the more certain prevention of which, blood-letting, both general and local, are particularly useful, on the first approach of such symptoms as indicate an affection either of the mucous glands of the urethra, the prostate gland, or bladder.

11. That when, notwithstanding of blood-letting, a low regimen, and other parts of an antiphlogistic course, tumours form in Cowper's glands, or in other parts contiguous to the urethra, and when these parts actually suppurate, the matter should be immediately discharged by an incision of a sufficient size, and the sore treated in the usual way.

12. That

12. That in affections of the prostate gland, which do not give way to blood-letting, opium is chiefly to be depended on for relieving the irritation and distress which ensue from them; the pain being often so severe that no other remedy proves useful. That opium, in these cases, proves always most effectual when applied directly to the parts affected, in the form of injection; and that extract of hyoscyamus may be used when the costiveness that usually results from opium, proves hurtful.

13. That when the bladder is affected, opium or hyoscyamus are in like manner to be used for relieving the pain. That uva ursi is the most effectual remedy for obviating the discharge of viscid mucus the usual consequence of inflammation of the bladder; and that the thickening of the coats of the bladder, which inflammation, from whatever cause it arises, is apt to induce, has in some cases been removed by a gentle course of mercury.

14. And

14. And lastly, it appears, that the leading symptoms of Gonorrhœa are so much alike in both sexes, that the general method of treatment is applicable to both: only that in women, as the situation and organization of the parts admit of it, injections may at all periods of the disease be used with more freedom than in men, an inflamed state of the bladder being, in women, almost the only circumstance that can take place in Gonorrhœa to render injections improper.

CHAP.

CHAPTER III.

Of the Consequences of Gonorrhœa Virulenta.

SECTION I.

General Remarks on the Consequences of Gonorrhœa Virulenta.

ALTHOUGH the treatment pointed out in the preceding sections for the cure of Gonorrhœa proves in general successful, yet it must be admitted, that this does not always happen; that instances occur of different symptoms proving obstinate, notwithstanding a careful and attentive

tentive application of every remedy with which we are acquainted.

The causes of this failure I have already endeavoured to explain. In this part of the work I mean to speak of the consequences of *Gonorrhœa*, some of which are, in most instances, the effect of mismanagement, while others ensue after the greatest care and attention in the conduct of the cure. They are all, however, of a local nature, and not necessarily connected with any general disease of the constitution. The following is the order in which I mean to treat of them :

Gleet ; feminal weakness and impotency ; strictures in the urethra ; abscesses and fistulæ in perineo ; deranged sensations in the bladder and urethra ; swelling of the testicle ; swelling of the epididymis and spermatic chord ; swelling of the lymphatic vessels of the penis ; swelling of the glands in the groin ; excoriations of the glans and prepuce ; phymosis ; paraphymosis ; warts on the glans, prepuce, and labia pudendi. And, lastly, I shall add a few

few observations on what may be termed Gonorrhœa Simplex, in which a discharge takes place from the urethra, without any infectious matter being applied to it.

SECTION II.

Of Gleet.

WHEN the discharge in Gonorrhœa continues obstinate, after the symptoms of inflammation are removed, the disease is usually termed a Gleet.

From this definition we might be led to imagine that the import of the term Gleet would be clearly and generally understood, and that there could be no risk of its being misapplied. This, however, is not the case; for the symptoms which one practitioner considers as Gleet, are by others said to be Gonorrhœa. Some assert that Gleet does not take place till the discharge

becomes colourless, and resembles mucus; while others are of opinion that Gonorrhœa changes into Gleet before this change of colour is perceived.

All agree in this, that Gleet does not take place so long as the discharge is capable of communicating infection; but no precise marks have yet been discovered by which we can judge of this circumstance with precision. When the discharge becomes transparent and viscid, like mucus, I believe that no infection will ever ensue from it; but I also suppose, that it is often equally harmless long before this change has appeared in it. By the use of astringent injections, demulcents, and cooling purgatives; and, in some cases, by the lapse of time alone, the running in Gonorrhœa will lose its colour, acquire a mucous appearance, and even abate in quantity, and yet it will again become yellow, and appear in larger quantities than at first. In such circumstances the discharge may be considered as altogether deprived of the power of communicating

infection; at least no instance of the contrary has ever occurred to me, and I have reason to think, that, in every instance it will be found to prove inoffensive where the inflammation by which it was at first induced has been once completely removed, whatever the method of cure may have been by which this was accomplished: while, on the contrary, I am convinced, from a variety of facts which I could enumerate, that so long as the primary inflammation of Gonorrhœa continues, however long this may be, the discharge is equally capable as at the first of communicating infection. Admitting, therefore that the running should not be denominated Gleet so long as it remains infectious, it is evident that this term ought not to be applied to it, till it has become clear and transparent, or till the inflammation by which it was at first excited is removed, and of which we can only be certain by the pain having ceased which accompanied the inflammatory state of the disease. The discharge in Gonorrhœa

rhœa frequently disappears entirely, and the patient considers himself, for the space of several days, nay, in some instances, for weeks, as completely cured; when, either by violent exertion on horseback or on foot, by excess in drinking, or too early connection with women, the running will again take place, with every mark of a new infection. When the patient, however, is conscious of not having exposed himself to the risk of being infected, he may always consider this renovated discharge as of a harmless nature, provided the inflammation and pain by which it was at first excited had previously disappeared. Among other proofs of this, I might mention, various instances of married men, who, from Gonorrhœa contracted in youth, have frequently, during life, from one or other of the causes that I have mentioned, experienced frequent returns of this discharge, who, in this situation, have had frequent connection with their wives, without communicating the disease. In some of these

the discharge will be absent for several weeks, nay, for months together; while in others it has not disappeared for more than two or three days at once, during the space of twenty years.

On the first recurrence of this renovated discharge, as I have termed it, it has exactly the appearance of a new infection; but the event soon shews it to be different. If astringent injections are employed, they, for the most part, put an immediate stop to the discharge; and, when left to itself, the matter becomes more quickly colourless than in recent cases of Gonorrhœa.

In one instance, a gentleman applied to me in a state of great anxiety and distress, the day after his marriage. He came upwards of twenty miles from the country, with every appearance of a recent clap; which, he assured me, had broken out that very morning, although no appearance of an infection, under which he formerly laboured, had been perceived for upwards of three months, nor had he, during

during that period, been exposed to the risk of getting a new one. This, in the state of temporary frenzy, under which I found him, led to the distressful idea of his having been infected during the preceding night, by his newly married wife. I assured him that this was impossible; for that, independent of the surety which he derived from the unblemished character of his wife, no infection could have appeared with such violence in such a short space of time; and on hearing that he formerly laboured under Gleet, I also ventured to say, that the discharge would probably disappear almost as suddenly as its approach had been rapid. My prediction proved true. I immediately threw up a vitriolic injection, and caused him repeat it three or four times in the course of a few hours. By five or six o'clock in the afternoon nothing but a slight oozing from the urethra was perceptible; I furnished him with more of the injection, and he went home perfectly satisfied in the evening.

This happened several years ago, and the same appearances have uniformly recurred since that period, upon every connection with his wife, but no infection has ever been communicated to her. For a considerable time he always had recourse to the injection on the running taking place, but at last, being perfectly convinced of its being harmless, he allowed it to go on; so that for these last three or four years, he has seldom been free of it for many days together.

But although patients, when long accustomed to this discharge, come to find that it does not communicate infection, still they can never look upon it with indifference; they all find it troublesome and distressful, and are therefore, at times, anxious to have it removed. When, along with this we consider, that long continued Gleets are apt to lay the foundation of some very obstinate and perplexing diseases of the urethra, it must at once appear, that in every instance, this symptom merits our most serious attention.

Gleet

Gleet seems evidently to arise from different causes, requiring different modes of treatment: it will therefore be proper to consider them separately.

1. The most frequent variety of Gleet succeeds to the first stage of Gonorrhœa, in which we do not suppose, that the original inflammation went farther than the urethra itself, or the small mucous glands immediately emptying into it.

When the cure of this stage of Gonorrhœa is interrupted, either by improper treatment, or by negligence on the part of the patient, and when the discharge is thereby allowed to go on for a great length of time, Gleet is thus frequently produced. Astringent injections will, for the most part indeed, put a stop to the running, but the slightest excess very commonly excites a return of it.

This variety of the disease we conclude to proceed from relaxation and debility in the parts first affected, and that the obstinacy with which it often continues de-

pend upon a farther degree of weakness, induced in these parts by the longer continuance of the discharge; by which it would appear to have a power, if not counteracted, of continuing or propagating itself.

By some, indeed, this idea of weakness or relaxation being capable of producing Gleet, is ridiculed; and as the suggestion comes from very respectable authority I think it right to notice it*.

Mr Hunter observes, that by mechanical weakness is understood the want of power to perform some action, or sustain some force; by animal weakness the same; but he cannot understand the expression when applied to an animal, performing an uncommon, or an additional action, as seems from the quantity of matter discharged, to happen in Gleet.

This opinion appears to be founded upon the idea of an increased discharge being always the consequence of an increased

* Vide Treatise on the Venereal Disease, by John Hunter, p. 100.

fed action in the vessels of the part from whence it proceeds; and it originates from his not discriminating between general debility, and local relaxation or loss of tone in a particular part.

Although an increased discharge in the vessels of a part would seem to imply an increased action in these vessels, yet the reverse of this will, I believe, in most instances, be found to happen; and that superabundant evacuations proceed, in a great proportion of cases, from local debility. Loss of tone in the exhalents, will necessarily produce a more copious discharge of their contents than will probably happen while their power of retention remains entire. Were these vessels unconnected with the rest of the system this would not take place; but connected as they are with the arterial system, while the vis a tergo remains the same, any partial debility to which they may be liable, must, perhaps universally, be attended with a preternatural effusion of their contents.

There

There is much reason to suppose, from the phenomena of inflammation, that an increased action takes place in the vessels of the part affected: but during the existence of this increase of tone, we commonly find, that, in Gonorrhœa, the discharge is not so large as it afterwards becomes when the symptoms of inflammation abate. Nay, it is well known that the discharge is apt to stop entirely when the parts affected inflame to a greater degree than usual, and that nothing so readily solicits a return of it, as the removal of this inflammation by emollient injections.

This is an argument of some importance in favour of our opinion, and it is farther confirmed by the nature of many of the remedies that we employ in Gleet; which are either astringent, strengthening, or stimulating, and other applications of a similar nature, which seem to act by exciting an increased exertion in the vessels of the affected parts, by which they
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are enabled to resist the action of the arterial system from behind.

I therefore consider it as clear and decided, that this variety of Gleet proceeds from relaxation and debility of the exhalents of the urethra, and, perhaps also, of the excretory ducts of the smaller mucous glands of that passage.

This opinion of Gleet being connected with debility, may indeed be carried too far, as happens, I believe, daily in common practice. Where Gleet has been of long duration, many imagine that it has either at first arisen from general weakness, or that it has tended to excite such a general degree of debility as must obstruct every attempt towards a cure, till this state of the system is removed.

Hence patients in this situation are with much care and anxiety enjoined the use of bark, steel, and other tonics, with a view to remove the general debility; while less attention is usually given to the real cause of the disease, the local relaxation of the parts affected.

That

That general weakness often takes place in Gleet, and that it may even be induced by a long continuance of the discharge, will not be denied ; but I have much reason to think, that in practice, this idea is often carried farther than it ought to be. This must always be the case whenever it makes us lose sight, as I have observed already, of the real origin of the disease ; but there is also cause to imagine, that in giving additional vigour to the system at large, we tend to increase the discharge by the urethra, unless the tone of the parts which have been more particularly weakened be at the same time restored. The reason of this has been explained above, and I have often had proofs of the hurtful tendency of the practice ; by which, while the patient, from the effects of sea-bathing, a full diet, and the use of tonics, was daily getting more full in flesh than he was before, the disease has evidently been gaining ground, from no particular attention being given to the state of

of the parts from whence the running originated.

In a state of universal debility, whether induced by a long continuance of the discharge, or by any other cause, the most powerful remedies should no doubt be employed for it; but what I wish to inculcate is, that in common practice we rather do harm by considering this general relaxation of the system as the first object of attention, when, in fact, it often either does not take place at all, or only in such a degree as to render it a matter of very trifling importance, when compared with the local disease in the urethra.

In a great proportion of cases of this variety of Gleet, our attention should be chiefly directed to this affection of the urethra; and by experience we find that such remedies are chiefly to be relied on as act directly upon the seat of the disease.

Various remedies have been employed for this purpose, but they may all be comprehended under the two general heads of
astringents

astringents and stimulants; for all that have yet been found useful in this description of Gleet, seem either to act by their astringent properties, or by their power of stimulating the parts to which they are applied.

When astringent injections have not been employed, they ought, in the first place, to get a full trial; for although they do not always prove successful, yet they frequently do so, and we seldom find that any risk ensues from them, as sometimes does from those which stimulate.

Any of the astringent solutions for which prescriptions are given in the Appendix, may be employed; but the vitriolic solution, No. 18. is one of the safest, and very commonly proves the most effectual. In the use of all astringent injections they ought to be thrown up frequently, not less than six or eight times a day. This I particularly noticed when speaking of injections in Gonorrhœa, and it proves equally proper in this variety of Gleet.

But

But where astringent injections have been already employed for the cure of a previous Gonorrhœa, and where there is no doubt of their having received a proper trial, as there would be no cause to expect advantage from a farther use of them, they ought not to be longer continued.

In that state of the disease where a plentiful discharge takes place, with little or no pain, and where astringents have been employed with no advantage, stimulating applications are to be chiefly trusted.

The stimulants that we employ are of two kinds; acrid solutions and mixtures in the form of injections; and bougies: which ever of the two are used, it ought to stimulate the parts gently to which it is applied, but not in such a degree as to excite much inflammation. Remedies of this class prove most successful where they give only a moderate degree of pain and heat in the urethra; such as is felt in the commencement of the first stage of Gonorrhœa. We often indeed meet with instances of a newly contracted clap carrying
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ing off a Gleet of long duration; and as this is always productive of some degree of inflammation, we conclude that the remedies employed in Gleet must act in a similar manner, by gently stimulating and exciting the parts to inflame in such a degree as experience shews to prove useful. To excite violent pain would at all times be improper, as the inflammation which this would induce might occasionally go too far. Much harm, indeed, has been done by want of attention to this circumstance. A swelled testicle is not an uncommon effect of it; and I have known the inflammation proceed to the prostate gland and bladder.

This, however, may in almost every instance be prevented, by due attention to the strength of the injection; nor can it ever occur but from some very unusual peculiarity in the state of the parts, or from great inattention on the part of the practitioner. Although none can go more fully into the use of injections than I have done for a long time past, I have not met with
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more than two or three instances of swelling of the testes being ever induced by them: I rather, indeed, think that a proper use of injections tends to prevent such frequent recurrences of this symptom as would otherwise happen. It has not at least been nearly so frequent, in the course of my experience, since I trusted almost entirely to injections for the cure of Gonorrhœa, as it was before, and I conclude that in this respect they act entirely by cutting short the duration of the discharge, which in a most obvious manner they do, and by which they must with much certainty lessen the chance of attack of all symptoms connected with the disease, swellings of the testes as well as others.

In the use of injections, however, much circumspection is necessary; for if they be not of a strength sufficient to excite some degree of irritation, little or no advantage ensues from them, while much harm might be done by having them too strong. In the formulæ annexed to this they are of a proper strength for a great proportion of

cases ; and as an additional strength can be easily given when on trial they are found to be too weak, they should not perhaps in any instance be stronger on their first application.

One of the best injections that I have employed in Gleet, is a weak solution of muriated corrosive mercury in water *. That is, in the proportion of an eight part of a grain of the mercury to an ounce of water, which is as strong as it ought ever to be at first ; although some in a gradual manner come to bear it in the quantity of half a grain to the ounce. I know that some have advised it of a still greater strength, even to the extent of a grain of mercury to the ounce of water ; but although I am in the daily practice of using it, I have met with none who could bear it of this strength. I therefore suspect that those who advised it have never been in the practice of using it.

I have taken the more particular notice of this, as several instances have fallen within

* Vide Appendix, No. 24.

within my observation, of very pernicious consequences from injections containing too great a proportion of corrosive mercury, while no inconveniency ensues from them when not stronger than those I have pointed out.

Where a solution of corrosive mercury by itself has failed, I have known the addition of saccharum saturni prove useful*; and in some very irritable patients, in whom even the smallest quantity of the mercury has given much pain, an addition of mucilage has enabled them to bear it. Of this a formula is given in the Appendix†.

A solution of sal ammoniac‡ proves sometimes effectual in this state of Gleet. The volatile alkali, such as aqua ammoniæ, or spiritus salis ammoniaci, properly diluted, make likewise useful injections for this purpose, as in formulæ, No. 28. and 29. ; and verdigrise, dissolved either in oil or in spirit of sal ammoniac, afford also a very effectual form of injection for the

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same

* Vide Appendix, No. 25. † No. 26. ‡ No. 27.

same purpose: formulæ of these last are given in Nos. 30. and 31.; and in some instances tincture of catharides, properly diluted, as in No. 32. has been found to answer.

Besides the circumstance of ascertaining the proper strength of these injections, a good deal of address is required in applying them. They must not be employed either so long or so frequently as astringent injections: From these no harm can ensue, however frequently they may be applied; but stimulating injections should not be continued longer than merely to excite some degree of irritation in the parts affected.

This being accomplished, a few days should elapse before any other remedy is employed; for it sometimes happens that the running will stop after these stimulating injections are laid aside, although, during the use of them, it appeared to be increased. But when, after an interval of three or four days, this does not take place, astringent injections should be employed
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in the manner already pointed out for the first stage of Gonorrhœa.

Even these will not always succeed; for we frequently find that although the running may disappear for a few days, that it will return again and again, and with equal violence as at first.

In such circumstances, the stimulating injections should again be renewed, and the inflammation excited in a greater degree than before; for I have commonly found that this may be done with more safety in the subsequent application of these injections; and in the more advanced stages of Gleet, the higher the degree of inflammation that can with safety be excited, the more certain we are of its proving successful.

When injections do not succeed, a proper application of bougies will sometimes answer. By irritating the urethra, bougies act nearly in the same manner with stimulating injections: in some instances they have appeared to prove more effectual than injections, perhaps from the support that

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they give to parts which have been deprived of their tone. This, however, does not happen with much certainty ; inasmuch that I always give the preference to injections in the first instance, as being less formidable in the application to those who have not been accustomed to the use of bougies.

Bougies composed of the most simple materials, commonly answer all that we expect from this kind of remedy ; but when these fail in exciting a sufficient degree of inflammation, they are easily made more active by dipping them in oil of turpentine, in a thin liniment of wax and oil with a small proportion of red precipitate, or in common basilicon reduced with oil of turpentine, to the consistence of a liniment.

I have no reason to think that mercurials act in the cure of Gleet as specifics ; but the stimulus which mercurial ointment gives to the urethra, when applied upon bougies, proves often as effectual as that of any other irritating substance. It is proper, however, to observe, that ointments

ments used for this purpose should be strongly impregnated with mercury: there should not be less than equal parts of quicksilver and hog's-lard; and I have sometimes thought that mercury extinguished by triturating with honey, acts more certainly as a stimulant than it usually does with any unctuous substance.

If the constitution is much debilitated, while this application of remedies to the diseased parts is going on, a nourishing, invigorating diet should be advised. Animal food, together with a moderate portion of red wine should be allowed daily; and in such circumstances bark may with propriety be exhibited as a tonic: but for the reasons that I have given, there is much cause to think that the general practice of giving bark, steel, and other tonics, in all cases of this kind, is by no means well founded, and in many instances that it does harm.

Some of the stimulating astringent balsams, given internally, frequently prove useful here; probably from their ten-

dency to stimulate in a more particular manner the organs of urine. Balsamum copaiba is chiefly used for this purpose, but Canada balsam, and all the turpentine, may be employed with perhaps equal advantage. Fifteen or twenty drops of any of these may be given three or four times a-day.

A cautious use of cantharides has also proved serviceable in this variety of Gleet. Ten drops of the tincture may be given two or three times a-day.

But, although some advantage may be derived from all of these remedies when employed along with local stimulants, yet no dependence is otherwise to be placed on them. This, it may be said, renders the advantages that are said to arise from them both doubtful and equivocal; but in different cases I think I have evidently derived greater benefit from a combination of the two sets of remedies, than we usually do from the separate use of either of them.

Cold

Cold bathing is a remedy commonly advised in Gleets, and where the constitution is much debilitated, it seldom fails to prove useful; otherwise no advantage accrues from it, if it be not from the local application of cold to the parts chiefly affected. In this view, the daily effusion of cold water upon the penis, and bathing the perineum, is sometimes advised with advantage.

2. The next most frequent variety of Gleet succeeds to the second stage of Gonorrhœa. After all the symptoms excited by the actual presence of inflammation have subsided, this variety of the disease is very apt to terminate in Gleet.

In the third section of the last chapter I endeavoured to shew, that in this stage of Gonorrhœa, Cowper's glands are chiefly affected, and that they afford a great proportion of all the matter that is discharged. Any inflammation which takes place along with this in the membrane of the urethra, is, for the most part, easily removed;

removed ; so that the Gleet, which often succeeds, proceeds either altogether, or nearly so, from the cavities of these glands.

Gleet, proceeding from this cause, is, for the most part, easily distinguished from that which I have described as the first or most frequent variety of the disease. In this last the matter usually proceeds from within an inch, or little more, of the glans ; or when parts farther back are affected, the discharge may be easily forced off from them by very gentle pressure upon the perineum : but, in the other, the matter is in every instance found to proceed from the upper part of the urethra ; a greater degree of pressure upon the parts is necessary to force it out ; and some degree of fullness, accompanied with irritation, and even with pain, is experienced on the perineum being compressed for this purpose.

We are also assisted in the diagnosis by the history of the preceding Gonorrhœa ; for it will uniformly appear that the first
variety

variety of Gleet has succeeded to the first stage of Gonorrhœa, and that the second stage of Gonorrhœa has given rise to that which we are now considering.

In the treatment of Gleet it is of importance to have this difference ascertained, for the remedies which commonly prove successful in the one, are used in the other, either without any advantage, or even with evident proofs of doing harm. Thus, although in the first variety of Gleet we depend so much upon stimulating injections, that a cure can seldom be obtained without them; in the other, where the larger glands of the urethra are affected, these injections render every symptom worse than it was before. At least this always happens where the injection is of such a strength as to excite pain and inflammation; and if weaker than this, it may be used for an indefinite length of time without any effect. The glands opening into the urethra being here the seat of the disease, astringent injections, applied as I have elsewhere observed, to
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their excretory ducts, may produce a temporary stoppage of the discharge; but, as they do not reach the cavities of the glands, they cannot be supposed to produce any permanent advantage. While, again, when an injection of such a strength is employed as to excite inflammation upon the ends of these ducts, it is apt to produce swelling in the glands themselves, which at last commonly terminates in suppuration, to the great distress and disappointment both of the patient and practitioner.

Hence whenever it is with certainty known that a Gleet is of this description, injections should be no longer employed; or when, for the satisfaction of patients, a farther trial of injections become necessary, such preparations only should be used as are slightly astringent.

In such circumstances, bougies, and blisters to the perineum, are the most effectual remedies that I have employed. The bougies should be of the mildest kind, such as stimulate the parts gently, without exciting

exciting inflammation. By this, and by the support which from their size and form they afford to the weakened parts, they often prove useful; and even when they stimulate more than we either may have wished or expected, they do not so readily do harm as injections; for the inflammation which bougies in this situation excite is always accompanied with a copious discharge of matter, by which the inconvenience that might otherwise ensue from them is prevented.

Bougies, for every purpose, should be as large as the capacity of the urethra will admit; but a full sized bougie is still more necessary in this variety of Gleet than in some other symptoms of the disease; for it is chiefly by their size that they prove useful in the cure.

In a great proportion of cases it appears, in the course of a few days, whether bougies are to prove useful or not; but no permanent benefit ever ensues from them if they be not continued for a considerable time. When the disease has been
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of long duration, the bougies should be applied for the space of ten or twelve weeks, and not even then desisted from if the cure be not confirmed. It is proper, however, to observe, after bougies have been used without interruption for three or four weeks together, that they should from time to time be laid aside, that the effects which they produce may be discovered; for while they are daily introduced we cannot with certainty know whether the discharge which takes place is the effect of the disease, or of the irritation which the bougies excite, as they can never be applied for any length of time together, not even to a sound urethra, without being found covered with matter, or with mucus in the form of matter, on their being withdrawn.

When bougies fail, a blister applied over the whole perineum sometimes proves useful. Whether it is by stimulating the parts affected that blisters act in the removal of Gleet, or by the discharge which they excite from the surface, is uncertain; for in
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some an evident advantage ensues upon their first application, and before any quantity of discharge can have occurred ; while in others no effect is observed to result from them till the second, third, or perhaps, fourth blister, has been applied. In a few instances, some advantage has appeared to ensue from a small portion of the blistered part being kept open with epispastic ointment ; from which I was induced, in two cases of much obstinacy, to advise the introduction of a small seton on one side of the perineum ; but although this seemed likewise to lessen the discharge, the advantage derived from it was neither so great nor so obvious as to compensate the inconvenience arising from the disagreeable nature of the remedy.

Where this variety of Gleet proves obstinate, scrophula is often discovered as the cause of it. If scrophula has not already appeared in a more evident form in other parts of the body, it often happens that the glands of the neck, and other suspicious parts, are found to be tumefied,
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and that the complexion of the patient, which is commonly delicate, gives much cause to conclude that the system is not free of it.

In such circumstances, all the remedies usually employed in scrophula are advised. Bark and hemlock sometimes prove useful; but no remedy that has yet been employed acts with equal utility as sea-bathing.

In enumerating the different varieties of Gleet, I have proceeded in the order in which they most frequently appear. The next of which I shall take notice proceeds from strictures in the urethra.

In an ensuing section I shall find it necessary to enter more minutely upon the consideration of venereal strictures in the urethra: at present, therefore, it seems only necessary to say, that they are to be considered as a very frequent cause of Gleet. The spongy surface of the urethra, the substance in which these strictures are seated, is very apt to become tender and excoriated.

excoriated. A slight degree of ulceration thus takes place, which continues to give out matter while any degree of the stricture remains; and where the extent of the disease is considerable, this of itself would afford a very copious discharge; but besides this, the remora which every stricture occasions, of urine and mucus between the part in which the stricture is seated and the bladder, acts as a very powerful cause of irritation, and in this manner renders the discharge more abundant than we almost ever find it to be, in Gleet proceeding from any other cause.

Where strictures are not suspected as the cause of Gleet, as often happens where the obstruction to the flow of urine is not considerable, the patient as well as the surgeon is apt to be deceived, and to proceed daily with the plan of effecting a cure by injections, balsam of copaiba, and other astringents. None of these remedies, however, have any influence, and the discharge, after many years continuance, is found to be nearly in the same state, or

perhaps worse, than it was at first. Of this every practitioner must have met with instances, and they always prove the source of much perplexity and embarrassment.

Whenever Gleet, therefore, resists the usual remedies, and is thus particularly obstinate, it should be our first object to ascertain the real state of the urethra, and to learn whether strictures exist in it or not. In some cases this will at once be known from the state of symptoms obtained from the patient, as well as from external pressure upon the urethra from the point of the penis to the fundament. This, however, will only happen in the more severe degrees of the disease. Where the obstruction is slight, it may, as I have already observed, pass unnoticed; so that in all such circumstances, and especially where there is any cause for doubt, the passage should be examined with a bougie, by which alone any certainty upon this point can be obtained.

When

When the existence of stricture is discovered, all other remedies should be laid aside, and the cure trusted to bougies. Hereafter I shall have occasion to speak more particularly of bougies; at present it is only necessary to say, that they are the only remedy upon which we can depend for the removal of strictures, and that they very commonly prove effectual when persisted in for a due length of time.

When the discharge proceeds entirely from strictures, it will, for the most part, soon subside on these being removed; but when it continues more than a few days after the bougies are withdrawn, it becomes proper to employ astringent injections in order to carry it off. Lime-water answers well: for this particular purpose, indeed, it answers better than any other form of injection that I have used, but it requires to be diluted with an equal quantity of common water.

4. The last variety of Gleet which I have to notice proceeds from a swelled state of the prostate gland, and succeeds, as we have already had occasion to see, to the third stage of *Gonorrhœa Virulenta*.

In treating of *Gonorrhœa* the symptoms were enumerated by which affections of the prostate gland may be discovered; but we have no certain means of knowing to what extent this gland may be swelled but by examination with the finger in ano.

Besides the inconveniency arising from the discharge itself, in common to this and every variety of Gleet, there is for the most part a good deal of uneasiness, and even pain, produced by the swelling of this gland; which excites also a more frequent desire to pass water than any other variety of the disease, together with a sensation of heat and fulness over the whole parts contiguous to the anus. The *tenesmus* with which it is often accompanied is also a very distressful symptom.

Gleet,

Gleet, proceeding from this cause, is sometimes combined with other varieties of the disease, particularly with that which was last described. In this case the discharge has most frequently the appearance of being a mixture of pus and mucus; but when it proceeds entirely from a diseased state of the prostate gland, it is thinner than purulent matter, and, although sometimes tinged, of a pale, or yellow colour, it is more frequently of the consistence and colour of mucus.—This makes it often be mistaken by the patient for a discharge of semen.

No injections are of any utility in this variety of Gleet; nor is any advantage derived from bougies. On the contrary, they are both apt to do harm, particularly a perseverance in the use of them; a practice which those not accustomed to this branch of business are very apt to fall into. Swellings of this gland are very commonly attended with some degree of obstruction to the passage of urine, and when this is mistaken for strictures, as often

happens, bougies are immediately advised in order to remove it. For the most part, however, they excite much irritation in the gland itself, as well as an increase both of the pain and of the discharge.

Opiates are the remedies upon which our chief dependence should be placed. By allaying irritation, they not only keep the patient free from pain, but in doing so they tend more than any other remedy to lessen the discharge. It must, however, be acknowledged, that they act chiefly as palliatives; but even the mere prevention of pain is a point of no small importance in a disease which otherwise is apt to render the patient miserable. In speaking of affections of this gland in the third stage of Gonorrhœa, I advised opiates to be used in clysters, instead of being taken by the mouth. They do not, in this form, so readily induce sickness, and they usually prove more effectual in relieving pain.

In several instances, where no great advantage has been derived from all the
quantity

quantity of laudanum that durst be given by the mouth, patients have been kept easy by a grain or two of opium dissolved in a small quantity of mucilage, and thrown, from time to time, into the rectum.

Where this disease of the prostate occurs in scrophula, an occurrence by no means uncommon, hyoscyamus, cicuta, and sea-bathing, are the remedies usually employed; and although they seldom accomplish a cure where the gland is much swelled, yet they frequently afford relief; and slighter degrees of the disease have, in some instances, been removed by them.

In the use of hyoscyamus, I think it right to observe, that it is commonly given in too small doses. Instead of giving a grain only or so of the extract at first, and increasing the dose slowly, it may, to an adult, be given to the quantity of six or eight grains two or three times a-day, and increased to twelve, fifteen, or even twenty grains for each dose.

Some practitioners, as I have already had occasion to remark, give mercury in every variety of Gleet, but I have never known any advantage derived from it, and where the prostate gland is diseased it very commonly does harm.

As I have mentioned above, that in Gleet proceeding from strictures in the urethra, a slight degree of ulceration sometimes takes place, it may be imagined that mercury should in such instances prove useful, from its well known powers of healing venereal ulcers. It is not, however, found to promote the cure of these ulcerations; a circumstance that may be considered as a farther proof of the difference between *Gonorrhœa Virulenta* and *Lues Venerea*; for if ulcers of this description were induced by the matter of *Lues Venerea*, mercury would seldom fail in curing them, while no other remedy would ever prove successful. But, instead of this, I have repeatedly found, that no advantage is derived from mercury in the treatment of this symptom; while bougies,

gies, when properly managed, very commonly prove effectual.

What I have hitherto said upon the subject of Gleet relates chiefly to the disease as it occurs in men, Gleet being in them both more frequent, and of much more difficult treatment than it usually is in women.

We often meet with it, however, in women: but it is here proper to remark, that Gleet is equally difficult to distinguish from fluor albus, as in a former section I have observed it to be with regard to Gonorrhœa. Referring to what was then said upon the means of distinguishing between Gonorrhœa and Gleet, I shall at present proceed shortly to observe, that in women we depend entirely for the cure of Gleet upon a proper perseverance in the use of injections. When after a due continuance of such as we conceive to be astringent*, if the discharge still continues, those should be employed which appear to act by stimulating the parts to which

* Vide Appendix, Nos. 18, 19, and 20.

which they are applied, particularly, Nos. 24. and 25.

When the disease is seated in the vagina, as is generally the case, these injections may be thrown up with freedom; but when the discharge proceeds from the urethra, they ought, on account of the contiguity of the bladder, as I had occasion to remark in a former section, to be thrown up with much caution.

In women I have sometimes found that a Gleet has arisen from ulceration within the verge of the vagina. In such instances injections have little or no influence; and as sores of this description are commonly connected with Lues Venerea, they can only be cured by a course of mercury.

It is proper, however, to remark, that women are liable, as men are, to excoriations from the acrimonious nature of the matter of Gonorrhœa. A discharge of matter from this cause will be most readily cured* by astringent injections; or
bathing

bathing the parts with lime-water, or a saturnine solution.

I have never met with the real venereal stricture in women. Excesses form in the urethra of females from other causes; but stricture from Gonorrhœa must necessarily, in this sex, be a rare occurrence. If it ever takes place, bougies must here, as in men, be depended upon for a cure.

SECTION III.

Of Impotency from Seminal Weakness.

WHAT is here meant by impotency, is a deprivation of the power of propagating the species.

This may proceed from various causes; but it is that variety of the disease only which is usually supposed to arise from weakness in the seminal vessels that we are now to consider.

Impotency

Impotency is an occurrence, which, in young people, either in reality or idea, takes place daily ; and as it proves at all times a source of much anxiety and distress, it necessarily becomes a frequent object of attention to practitioners. A degree of debility inducing want of retention in the seminal vessels is, no doubt, sometimes met with ; but the strong desire which Nature has wisely implanted in all men to be complete and entire, in whatever relates to the propagation of his species, is often, in early youth, the cause of much ill-founded suspicion on this point, and of circumstances respecting it being considered as real which never took place.

Thus there is nothing more common than for young people to suppose that they are weak and debilitated, on perceiving an oozing of mucus from the urethra, or a discharge of semen when at stool. The first, however, is natural to many when in full health, and where no suspicion of weakness exists ; and the latter, or a discharge

charge of semen, is at all times a frequent consequence of hardened fœces compressing the vesiculæ seminales, when these vessels are full of semen. But suspicion on this point being once awake, it is often difficult, and sometimes impossible, to remove it; insomuch that many have been rendered miserable by this alone, where no vestige of disease could be traced.

It is considered by many as one of the most certain proofs of weakness in the seminal vessels, when a discharge of semen instantly succeeds to an erection, or, perhaps, to an imperfect degree of it. But this may also happen from a state of over-excitement in the other parts of generation, and I also believe that it often occurs from the seminal fluid being collected in too great quantity in the vesiculæ seminales. I have reason indeed to imagine, as will appear in the sequel, that this is the most frequent cause of all such affections.

It may be said, that if the disease exists, and the patient is rendered completely
impotent,

impotent, that the cause of his being so is a point of little importance. It will appear, however, that this is by no means the case; for while real impotency, is in a great proportion of cases to be considered as incurable, we have it in our power, perhaps, in most instances of approach to this state, to accomplish a cure.

In the last section we have seen that Gleet proceeds at one time from an affection of the glands in other parts of the urethra, but in some cases that it arises from a swelling of the prostate. When this exists for any length of time, we find that not only the duct of the prostate gland becomes weak and relaxed, but that a loss of tone takes place in some of the contiguous parts, particularly in the excretory ducts of the vesiculæ seminales; insomuch, that a great proportion of all who have long laboured under Gleet from affections of this gland, have likewise been liable, in some degree, to feminal weakness. It is well known that long continued Gleets are sometimes the cause of
Impotency.

Impotency. For the most part, it is supposed, that this happens from the general debility which they induce. In some instances this may be the case; but I have much reason to think that they act much more frequently by inducing a local weakness only in the parts destined for the reception of the semen. This I conclude to be the case from this kind of debility taking place where there is no appearance whatever of general weakness, for instances often occur in constitutions apparently firm and healthy, of such degrees of weakness in the seminal organs, that emissions take place, not merely from partial erections and lascivious ideas, but from the ordinary friction applied to the penis in riding and walking; and, in some instances, from the effect of heat alone, whether excited by wine, exercise, or sitting near a fire.

Those who have suffered much from frequent returns of Gonorrhœa, and particularly from Gleet, are very apt to be distressed with a discharge of semen on the
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the slightest application of any of the causes that I have enumerated.

The local weakness thus induced in these parts by Gleet seems very much to resemble the effects of Onanism ; a habit so baneful to many of our youth, that I believe it to be more destructive in its effects than a great proportion of all the diseases to which in early life they are liable. Were it to prove hurtful to those only whose self-indulgence gives rise to it, there would be less cause to regret the effects of it ; but, besides rendering the parent himself miserable, it evidently entails the severest distress upon posterity, by generating languor, debility, and disease, instead of that strength of constitution without which there can be no enjoyment.

Some, I know, have entertained a different opinion upon this point, and imagine, that no bad effects are to be dreaded from the habit to which I allude*.

But

* Vide Treatise on the Venereal Disease, by John Hunter, chap. xii.

But this is so directly contrary to the experience of others, and I have met with so many instances of constitutions being irretrievably ruined by this kind of indulgence, that I cannot avoid, in the strongest manner, to say what I think of it: nor does it appear that any benefit could result to society from a contrary opinion being admitted, even allowing it to be well founded; for although no immediate harm might ensue from it to the constitution, it ought to be discouraged as unnatural, and as tending to divert the attention from an enjoyment of a superior kind. While, therefore, there is much cause to consider the practice as highly dangerous to all who follow it, and while such a propensity prevails towards it in that early age when boys cannot form a judgment of its hurtful tendency, I consider it as incumbent on those who write upon it to paint the baneful effects which result from it in their true and proper colours.

In the treatment of this variety of Impotency, whether it has been induced by Onanism, or whether it be the consequence of Gleet, it becomes proper to distinguish it into two stages. The one, so far as I have ever seen, is of a nature that does not admit of a remedy; while the other may, in most instances, be completely cured. Many consider it so certainly as incurable that the patient is led to despair from the first approach of it, and the opinion is often unfortunately realized merely from the cause that I have mentioned, our not distinguishing the two stages of the disease, and allowing that which I suppose may be easily removed, to proceed without any attempt for this purpose, to that state of it, which, in most instances, may be considered as incurable.

Practitioners are frequently applied to by young men labouring under what I shall term the first stage of Gleet; who, finding that a feminal discharge takes place from the slightest causes, perhaps merely

merely from their being in company with women; from lascivious dreams; or from the parts of generation being in any degree overheated, begin to be afraid that they shall never again have the power of retention, and conclude therefore that they cannot with propriety enter into a matrimonial connection. We often find that they admit Onanism to have been the primary cause of their distress, although, for a great length of time, perhaps for a number of years, they assert, and with no reason on our part to doubt them, that they have left it entirely off.

In this situation, whatever may be the appearance and habit of body of the patient, strengthening astringent remedies are prescribed; such as bark, steel, balsam of copaiba, and cold bathing; and whatever are his views, he is advised to avoid matrimony and all venereal intercourses.

In a great proportion of cases, however, I am convinced that both the practice and advice are erroneous. Following the bulk

of practitioners, I easily adopted them; but no good resulting from either I have long relinquished them both, and I have seldom failed of success by advising measures of an opposite nature.

In a great proportion of all who are injured by this pernicious habit, a morbid irritability of the organs of generation seems to be excited. By this a greater quantity of the seminal fluid is secreted than the vesiculæ seminales can retain: in consequence of which, it either bursts out during nocturnal dreams, or it is easily excited to flow by the application of any of the causes that I have mentioned.

Even after the habit has been long left off I have known the effects of it continue in a very distressful degree, and I conclude that they proceed chiefly from too plentiful a secretion of semen, from the nature of the remedy which in most instances I have found to succeed.

Instead of advising abstinence from women, I always inculcate as frequent connection as natural desires may point out; and

and when matrimony is in view, instead of being afraid of it, as often happens with this class of patients, from a fear of their not being able to perform the functions of it properly, I uniformly hold it forth as the most certain remedy.

The idea of inability prevails so strongly with many, that they are with difficulty persuaded to make the attempt; but the effects of it are so certain, that with patients in the circumstances that we are now considering, it may always be advised with confidence. Nor is the assistance of other remedies required in this plan of cure; at least in various instances, patients, who, for many years together had been almost constantly taking such remedies as they supposed would invigorate, but without any advantage, and who therefore were induced to consider their complaints as incurable, have, on laying these remedies aside, become completely and entirely well in the space of a few weeks after marriage. The irritability of the organs was thus diminished; the

morbid increase of the secretion was removed; and the seminal receptacles, not being over distended, were soon found to be endowed with a sufficient degree of retention.

This being a very frequent variety of the disease, I am thereby enabled to speak of it, and of the remedies employed in it, with some degree of certainty; and I can with confidence say, that none of those commonly advised, have ever, in the course of my observation, had any obvious influence; while the plan that I have pointed out very generally surpasses in its effects even the most sanguine hopes of the patient.

When a swelled state of the prostate gland is connected, as it sometimes is, with this variety of the disease, it necessarily renders the event more doubtful, and the effect, even of this and every other remedy, more uncertain. But even here the course that I have advised will sometimes prove successful. If the gland is really diseased, it will not remove this disease;

disease ; but I have, in more than one instance, found, even in this situation, that it proves equally effectual in removing the other, as if the gland was entirely sound ; and this obviates one of the greatest sources of misery to the patient.

It may be said, that while this, or any other variety of Gleet exists, the remedy that I have pointed out cannot with propriety be advised, from the risk of communicating infection. We know, however, that real Gleet does not communicate infection. Many instances have fallen within my own observation, and others must often meet with it, of this being clearly the case. I know, at this time, several instances of men, married for many years, who, during the whole period, have laboured under different varieties of Gleet, and who have never given the disease either to their wives or children. Gleet in men seems to be equally incapable with fluor albus in women to communicate infection.

In that stage of the disease which we have just been considering, a cure may, perhaps, in every instance, be accomplished. But when it has been of such duration as to form what may more properly be termed seminal weakness, and what I shall term the second stage of the disease, a very different prospect presents itself. Even in very advanced periods of the disease, the patient may derive advantage from a well regulated diet, and due attention to other parts of regimen, by which he will be rendered much more comfortable than otherwise he could be; but in this situation, a complete removal of the disease is not to be looked for: at least little dependence is to be placed upon the remedies usually employed for this purpose.

This very distressful stage of seminal weakness is often the consequence of Onanism long persisted in; and it is, as I have remarked, the frequent effect of Gonorrhœa and Gleet. In all such cases, the disease seems to proceed from real weakness

weakness or debility in the excretory ducts of the *vesiculæ seminales*; for it commonly happens where the whole system is much relaxed and emaciated; where there is therefore no cause to imagine that it can arise from too plentiful a formation of semen; and of which, indeed, we often meet with a very decisive proof, from a constant oozing of mucus being perceived in the urethra, while no ordinary cause of excitement is capable of producing any regular discharge or emission of semen.

In this situation, a variety of remedies are employed, chiefly with a view to restore and invigorate the tone of the weakened parts; such as bark, steel, balsum of copaiba, and cold bathing. At other times, where the disease is supposed to proceed from a deficiency of semen, provocatives are prescribed; such as high seasoned foods, all the terebinthenate balsams, and cantharides. But although I have had many opportunities of observing a complete trial of these, I have seldom known any advantage

vantage derived from them. The course, which in such circumstances I have known prove most frequently useful, was such as merely tended to restore the patient to his usual state of health. If Onanism has induced the disease, nothing will afford even the chance of a recovery till this is left off. Whatever may have been the cause of it, he ought to be put upon a nourishing diet; and he should live in an elevated, dry situation. Sea-bathing should be advised; and costiveness, with every thing that might tend to irritate the parts chiefly affected, should be avoided.

With a view to lessen that degree of irritability with which this disease is usually connected, opiates have been advised; but although I have often given them a full trial, I never knew any real advantage obtained from them. On the contrary, they have often appeared to do harm; for although they procure rest, yet the sleep which they give is always disturbed; the patient awakes in a state
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of more anxiety and distress than he experienced on going to bed ; and when opiates are habitually used, costiveness can scarcely be prevented, but by means of remedies which in this situation ought not to be given.

Hemlock is often used here, but I have never known any obvious advantage derived from it. Hyoscyamus, by acting as an anodyne, while it does not produce costiveness, has in different instances appeared to prove serviceable. Six or seven grains of the extract may be given at first, and the dose increased in a gradual manner to ten, fifteen, or twenty.

Conceiving, from some circumstances connected with the disease, as well as from many of the symptoms which ensue from it, that it may in some instances be of the same nature with paralysis, I have, in several cases, advised electricity, and in one or two of these it appeared to prove useful, but never so decidedly as to enable me with confidence to speak of it.

SECTION IV.

Of Obstructions in the Urethra from Gonorrhœa Virulenta.

WHEN speaking of Gleet I had occasion to remark that it is often the consequence of Obstructions in the Urethra. But Gleet, although the cause of some inconvenience and distress, is by no means the most important symptom with which Obstructions are accompanied. Strictures may take place in a certain extent, without giving much uneasiness, but whenever they arrive at such a height as to impede the flow of urine, they prove not only the cause of much distress and misery to the patient, but of much embarrassment to the practitioner.

Obstructions proceeding from Gonorrhœa Virulenta may be reduced to four general

general heads; tumours in the substance of the urethra and contiguous parts; spasmodic affections of the urethra; caruncles, or fleshy excrescences, in the urethra; and strictures, properly so called.

§ 2.

*Of Tumours in the substance of the Urethra
and contiguous Parts.*

WE have already had occasion to speak of Tumours, or swellings of the prostate gland, of swellings of Cowper's glands, and of the other smaller glands of the urethra. All of these produce obstruction to the flow of urine whenever they become so large as to diminish, in any degree, the magnitude of that canal.

Referring to what has already been said upon this part of our subject, I have at present to observe, that in the commencement of all Tumours in these parts, we ought, by every method in our power, to endeavour

endeavour to remove them by discusion ; for which purpose local and general blood-letting are the remedies chiefly to be trusted ; and as these, when carried a sufficient length, and when assisted by a cooling regimen, and the external use of cold saturnine applications, seldom fail in removing them, they should always be continued as long as they seem to prove useful. For although tumours in this situation are often easily removed after suppuration has taken place, by the matter being freely discharged, and the sores treated in the usual way, yet, before arriving at this size, a good deal of distress always occurs from them : in some instances, the sores heal with difficulty, while in others the matter bursts into the urethra, where it continues often during the life of the patient to be a constant source of uneasiness.

In others again the matter bursts into the scrotum, and from thence into the surrounding cellular substance ; and openings forming in consequence of this, commonly

ly between the scrotum and anus, a very troublesome disease is thus produced, termed fistula in perineo *.

It is therefore obvious that it is much for the advantage of the patient that every tumour of this description should be removed by discussion; but when our endeavours for this purpose do not succeed, and when suppuration takes place, we have it often in our power to prevent many of the bad consequences which otherwise are apt to ensue. By opening these tumours immediately on matter being perceived in them, we prevent the risk of their bursting into the scrotum and urethra, so that in this situation we ought never to wait till they are so fully matured as otherwise might be proper: and when once they have come so far as to make it necessary to discharge the matter, it ought to be done, as I have formerly observed, by making an opening the whole length of the tumour. This prevents the matter from lodging, and
from

* For the treatment of this vide *System of Surgery*, chapter xxxiii.

from insinuating into the contiguous parts, while the sores which ensue heal more kindly than they usually do when smaller openings have been made.

Among other consequences of abscesses in this situation bursting into the contiguous parts, it is proper to mention that the most distressful effects are experienced from the matter finding access to the corpus cavernosum of the penis. It usually spreads suddenly over the whole substance of the penis; small openings take place in different parts of the swelling, at which the matter is discharged; and these are always very difficult to heal: or, if the matter does not find a vent in this manner, it either bursts into the urethra, or the surrounding parts are apt to mortify.

When mortification takes place in this situation, it either soon proves fatal, or terminates in the entire loss of the penis; for a stop is seldom put to the disease till all the parts surrounding the urethra are destroyed, when amputation of the remainder becomes unavoidable. Indeed the hæmorrhagy

morrhagy which is apt to occur from deep-seated mortification of the penis is commonly of itself a sufficient motive for amputation being advised, for we can seldom put an effectual stop to the discharge till the mortified parts are removed.

For preventing mortification in this situation from spreading, opium has been recommended. I have certainly observed it prove useful in gangrene, both in these parts and in others; but more dependence is for the most part to be placed upon a plentiful use of bark. Whether opiates act in the cure of gangrene as antiseptics, is not, or perhaps cannot be ascertained. I rather believe that they do not; and I am inclined to think that they prove serviceable only by allaying irritation. In this manner they may be employed with advantage wherever gangrene is the effect of a high degree of inflammation. By lessening or removing pain they may diminish the cause of exertion in the vessels of the part affected, and may thus tend to prevent mortification from

extending so far as it otherwise might do; but I have never known them prove useful where the disease seemed to depend upon loss of tone, either of the part itself, or of the constitution.

§ 3.

Of Spasmodic Obstructions of the Urethra.

IRRITATION of the Urethra, in whatever way it is produced, has an evident effect in lessening the diameter of the passage. Hence, in stone in the bladder, the irritation, and consequent contraction of the urethra, is sometimes so great that a staff, even of a moderate size, cannot be passed. Stones in the kidney have frequently the same effect. Nay, I have known this contraction of the urethra induced by sand passing along the ureters. In like manner, the irritation produced in the Urethra by Gonorrhœa, is in some cases so great as

to excite contraction of the passage in a very distressful degree. I have known the urine so completely obstructed by this alone, as to give cause to suspect that strictures were formed of the most alarming nature; in which, neither staff, catheter, nor bougie, could be introduced, but with more force than can ever with safety be applied.

We judge that obstruction proceeds from this cause, when at one time it occurs in a severe degree, and soon thereafter, perhaps in the space of a few hours, it appears to be entirely or nearly gone. Of this I have met with various instances; in which, from the anxiety of the patient, and from suspicion of a more inveterate kind of stricture, repeated attempts have been made in vain to pass a bougie, and in which the stoppage has gone off entirely upon the exhibition of a dose of laudanum, or rubbing the perineum with anodyne balsam.

As the urethra itself does not appear to be muscular; as only a small portion of it

can be compressed by the muscles of the penis; and as the variety of obstruction that we are now considering, occurs in parts of the passage where these muscles do not exist, it has been imagined, that this temporary accession of stricture must be owing to other causes. It may perhaps happen that the violent irritation excited by chordee may, in some instances, produce such effusion into the cellular parts of the penis, as may compress the urethra; and that this may soon be removed by absorption, on the irritation by which it was produced being taken away. But although this, in a few instances, may be the case, I am convinced that it is not frequent, and that the urethra itself is endowed with a contractile power, by which, for the most part, this kind of obstruction is produced.

Were it to proceed from any kind of effusion compressing the urethra, the tumefaction thus produced would be obvious. Partial circumscribed tumours would either be discovered in the course of the urethra,

urethra, or the whole body of the penis, or a considerable part of it, would be swelled. We do not find, however, that this is apt to happen; at least, in a great proportion of cases, no tumefaction of the penis is perceptible.

This kind of spasm or cramp occurs occasionally in every part of the urethra. I have met with it within an inch of the extremity of the glans, but for the most part it happens behind the scrotum, near the prostate gland, in the membranous part of the passage.

In the treatment of Obstruction in the Urethra, it is a matter of the first importance to determine the cause by which it is produced, and especially to distinguish between obstruction arising from spasm, and that which proceeds from stricture, properly so called. In the latter, bougies, as we shall afterwards see, are almost the only remedies upon which we can depend; while, in cases purely spasmodic, they very commonly do harm. In the one, they remove the disease, by acting as

R 3 wedges;

wedges; in the other, they add to the violence of the contraction, by increasing the irritability by which it was at first excited.

As the degree of obstruction arising from spasm alone, is, in some instances, equal to what usually occurs from the most obstinate kind of stricture, it is only from an accurate account of the rise and progress of the disease by which we can judge of the difference.

When the flow of urine has at first been only slightly obstructed, and when this has gradually become worse, without ever being materially better, there will be ground to suspect that it proceeds from a cause of a more fixed and permanent nature: while, however complete the obstruction may be, if it came on suddenly, and has frequently become quickly well, without any obvious reason, there will be no reason to doubt of its arising from spasm.

We find, too, in obstruction proceeding from a fixed cause, that some pain is commonly

monly felt at one or more points. In some cases, a degree of hardness is perceived on the urethra being pressed at these points; while in others, although nothing is discovered on external pressure, the patient feels a degree of heat and pain, as if the parts were excoriated. Besides, in real stricture, a discharge of matter very universally takes place from the urethra; forming, as we have already had occasion to see, a very frequent cause of Gleet. But in obstruction proceeding from spasm, the pain is not fixed in any particular part. It appears to be more diffused; and is seldom in any distressful degree, if it be not by the stoppage which it gives to the flow of urine. No particular spot is discovered to be hard or sore upon pressure, nor does it necessarily afford a discharge of matter.

Spasm, indeed, may be accompanied with a flow of matter from the urethra. This will always happen where it succeeds to Gonorrhœa or Gleet, but it will never, on

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inquiry,

inquiry, be found to be the cause of the discharge.

The remedies to be employed for the removal of this variety of obstruction, are, warm emollients, anodynes, blood-letting, blisters, and electricity. Bougies, in certain circumstances, prove likewise useful.

Rubbing the parts affected, whether the perineum, or more anterior parts of the penis, with warm oil, sometimes answers a good purpose. Oil, strongly impregnated with camphor, and Goulard's form of the unguentum saturninum, when applied warm to the parts affected, also tend to remove this cause of obstruction. I have known it instantaneously removed by fomenting the perineum with a decoction of chamomile flowers or althea; and by the application of a bladder, filled with warm water.

Common anodyne balsam makes an useful application here. The parts in which the spasm is seated should not only be rubbed with it, but pledgets immersed in
it

it kept constantly applied to them. But one of the most powerful antispasmodics of our external applications is, a mixture of three parts of laudanum and one of æther.

Frequently, however, little or no advantage is derived from the external use of anodynes; while opium, given internally, is productive of the best effects. Forty drops of laudanum, given by the mouth, will often remove a spasm of the urethra that has resisted every variety of this remedy applied to the skin; and when thrown into the rectum, in the form of injection, it proves still more effectual in removing pain, irritation, and spasm about the anus, and in the organs of urine and generation, than when received into the stomach.

Whether this may proceed from the opium getting more nearly into contact with the nerves of the diseased parts, or whatever may be the cause of it, is perhaps difficult to determine; but, from much experience of their effects, I am convinced,

ced, that in all such affections, opiates prove most powerful when given in this manner.

In plethoric patients blood-letting proves often an effectual remedy, not only in removing spasm, but in preventing returns of it in future. Besides the discharge of blood from the arm in quantities proportioned to the strength of the patient, leeches should be applied along the course of the pained parts, and they seldom fail where the strength admits of the evacuation, of giving very effectual relief.

From an idea of spasm proceeding in most instances from what is termed a weakness of nerves, and from a dread which commonly prevails, of all nervous diseases being rendered worse by blood-letting, this is a remedy rarely employed. But it is right to observe, in this as well as in similar affections of other parts, that morbid irritability may be excited by causes of very opposite natures. It sometimes takes place where the constitution

tution is relaxed and reduced ; and, in such circumstances, evacuations of every kind very commonly do harm. But it more frequently happens from a state of plethora, in which blood-letting proves the most certain remedy, and where opiates, warm bathing, and other antispasmodics are often used for a great length of time, without any advantage.

From experience we find, that a stimulus applied to the skin proves often useful in relieving pain and spasm, in parts that are even deeply seated ; and upon trial, the same remedies are sometimes found to remove similar affections of the urethra. Obstructions arising from spasm, have, in different instances, been relieved by the application of volatile liniment, a strong impregnation of oil with volatile alkali, to the parts affected. A blister, applied over the perineum, has in different instances carried off the obstruction, and in some cases where blisters have not succeeded, the disease has been completely removed

removed by the application of a warm plaster.

In such cases blisters do not seem to act so much by the evacuation which they produce, as by the irritation which they excite; for it often happens that the pain and spasm are removed as soon as the skin becomes in any degree uneasy, and long before vesications are formed. Hence, a warm plaster, which does not contain so much cantharides as to render it capable of acting as a blister, by preserving a constant and more permanent stimulus than blisters, proves, in some instances, as I have already observed, more effectual.

Electricity has sometimes proved useful in removing spasm of the urethra: but it requires to be managed with caution, otherwise it is apt to add to the violence of the disease. In plethoric habits it always does mischief, and should never be advised in these till blood-letting has been premised.

I have had occasion already to remark, that in this variety of obstruction, bougies

gies frequently do harm, owing in a great measure to their being often passed with violence; when the parts, from being under some high degree of irritation, are in a state of strong contraction. This ought never, therefore, to be done; for while a state of spasm continues, we seldom succeed; or if we do get the bougie passed, it is always with more force than should ever be employed.

But bougies prove highly serviceable, even in Spasmodic Obstructions of the Urethra, when the violence of the disease is so far removed that they can be introduced with ease, and without exciting irritation: so that whenever this can be done, whether the spasm has been lessened by the use of emollients, anodynes, blood-letting, or any other remedy, it should always be advised. Besides the present relief which it affords, by removing any degree of the spasm that may remain, it tends with more certainty than any other remedy to prevent a return of it. This is particularly the case where spasm is conjoined,

conjoined, as is sometimes the case, with the more fixed kind of obstruction which we are presently to proceed to consider. When this takes place all our other remedies are to be considered merely as preparative to the use of bougies, which, in such circumstances, are alone to be depended on for a cure. It must always be remembered, however, that bougies are admissible only when they can be introduced and retained in the passage without exciting much irritation.

In all diseases of the genitals the state of the intestines requires particular attention. So much sympathy subsists between these parts that in patients liable to obstruction in the urethra, I have known a severe fit of the disease induced by a costive stool. Neither is much purging necessary or proper. The bowels therefore should be kept in such a state as to prevent irritation, as far as it can be done, whether from obstinate constipation or too frequent stools.

In

In a late publication by Mr Hume of London, the application of caustic is recommended in this variety of obstruction: But where spasm alone is the cause of the disease, it does not to me appear that the use of caustic is indicated. I believe indeed, as will more particularly appear in the subsequent parts of this section, that caustic is not only a very hazardous application in all diseases of the urethra, but that it seldom or never answers the purpose; so that here, where the obstruction is not fixed, but temporary, as we are entitled to believe it to be when it proceeds from spasm, I would say, that if caustic ever proved apparently useful, the disease in all probability would have vanished, whether this remedy had been used or not: The caustic is introduced by Mr Hume in the end of a bougie; and as the bougie in which it is fixed cannot be small, there is much reason to think, that a proper use of bougies alone would prove effectual wherever they can be passed of a size that admits of this method of using caustic.

§ 4.

*Of Obstructions in the Urethra from Fleshy
Excrescences, or Caruncles.*

OBSTRUCTION to the passage of urine has long been considered as one of the most distressful, as it is one of the most frequent consequences of Clap; and Caruncles, Fleshy Excrescences, or Carnosities, as they are sometimes termed, are mentioned by all the older writers upon the subject, as the most frequent cause of it.

This idea naturally arose from their perceiving that warty substances were sometimes formed within the urethra, near to its extremity, similar in appearance to those that are often met with upon the prepuce and glans; and not prosecuting the subject by opening the parts after death, they were led to suppose that more deep-

deep-seated obstructions were all of a similar nature.

So universally did this opinion prevail, and it was so strongly asserted in books, that although it was long ago, by some individuals, particularly by Saviard and Dionis, supposed to be ill-founded, yet even in our times it has been very generally admitted. This is so far the case, that in common conversation upon the subject, Caruncles are usually considered as the most frequent cause of obstructions in the urethra.

It is now, however, very certainly known, that this cause of obstruction is uncommon in the more remote parts of the urethra. Of late years, indeed, this has become a very frequent object of anatomical investigation; and I have reason to suppose, from all that I have yet heard, as well as from the result of my own inquiries, that it seldom exists farther up the urethra than half an inch or so, from the point of the glans. Warty excrescences are not unfrequent towards the orifice

of the urethra ; but I have seldom seen them, even in this situation, where they did not likewise prevail upon the glans and prepuce.

The obstruction to the flow of urine, from warts near the entrance of the urethra, is seldom considerable ; but it always gives much cause of anxiety to the patient, from a fear which he is apt to entertain of its becoming worse.

When seated just in the opening of the urethra, as sometimes happens, I have, in different instances, been able to remove them with scissars, and with small ligatures passed round them ; but they are seldom so situated as to admit of our taking them off in this manner. Neither are we at liberty to destroy them by a free use of escharotics, the irritability of the urethra rendering this a very hazardous attempt.

In all such cases we place our chief dependence upon bougies ; and, when duly persisted in, they very commonly answer the purpose.

Some

Sect. IV. *from Fleſhy Excreſcences, &c.* 259

Some difference of opinion has ariſen as to the manner in which bougies act in removing theſe excreſcences. In ſtrictures of a different kind no cauſe of doubt can occur, as they appear evidently to act as wedges, and to prove uſeful in proportion to the extent of mechanical preſſure which they afford; but in the cure of Caruncles they have been ſuppoſed to act chiefly by inducing ſuppuration upon the diſeaſed parts, ſo as to diſſolve them in this manner.

It is obvious, however, that, for the removal of theſe excreſcences, ſomething farther is neceſſary than the formation of matter. We daily, indeed, meet with inſtances of their being long immerſed in matter, ſometimes proceeding from their own ſurfaces, and at other times from the contiguous parts, without their being in any degree diminifhed. I rather conceive that bougies, even in this variety of obſtruction, operate partly by mechanical preſſure, and partly by exciting inflammation in the excreſcences. We ſhall hereafter have occaſion to ſee, that the

most effectual remedies employed for the removal of warts in other parts prove chiefly useful by making them inflame; and as bougies are well calculated for this purpose, I think it probable, while they evidently answer a good purpose by the pressure which they afford, that they prove likewise serviceable by exciting over these excrescences that slight degree of inflammation, which, in the treatment of common venereal warts, very commonly makes them drop off.

§ 4.

Of Obstructions in the Urethra, from Strictures properly so called; of Bougies, and Fistula in Perineo.

TWO varieties are met with of obstruction in the urethra from causes of a permanent or fixed nature. The most frequent is a thickened state of the membrane of the urethra itself, or rather, of the

the corpus spongiosum urethræ, similar to what happens in the membrane of the nose in cases of catarrh. At other times the urethra is drawn together, or contracted, as if a cord was tied round it, without any other appearance of disease.

In some instances these two causes of obstruction are conjoined; and we find, in the same person, the diameter of the passage lessened in one part by a mere contraction, and in another by a full, thickened state of the whole substance of the urethra.

Every part of the passage is liable to strictures; but they are more frequent behind the scrotum, that is, between the scrotum and bladder, than in other parts of it. In some a single stricture only takes place; but when the disease has been of long endurance, we commonly find two, three, or more.

Where the urethra is merely contracted, or drawn together, the disease seldom extends, at any one part, above the eighth part of an inch, but where the stoppage

proceeds from a thickened state of the substance of the urethra itself, it sometimes extends to the length of an inch or more.

From whichever of these causes a stricture proceeds, the urethra is commonly affected equally all round; but, in some cases, as Mr Hunter very properly remarks, the disease seems to be fixed entirely on one side of the passage, in which case the canal is thrown over to the opposite side.

This seems to happen only where the obstruction is produced by fulness or swelling of the urethra, and not where it proceeds solely from contraction.

Where this unequal diminution of the canal takes place even in one part only, it must evidently add greatly to the difficult introduction of bougies; and where more than one stricture takes place, if they are not exactly opposite to each other, a kind of twisting of the passage is produced, which renders the introduction of a bougie impracticable. It must, however be admitted, that instances of this are rare.

It

It deserves to be noticed, that the formation of strictures is often so slow and gradual, that a patient is not sensible of their taking place till the disease has been of long continuance. Being seldom attended with pain till the flow of urine is much impeded, any partial degree of obstruction passes without notice, by which the strictures become much more fixed and permanent than otherwise they would be. The patient, indeed, has seldom any suspicion of his situation, till the surgeon, for his own satisfaction, where Gleet continues more obstinate than usual, proposes to pass a bougie. Gonorrhœa having given rise to the Gleet, any obstruction that takes place to the flow of urine, is considered to arise from the same cause; and thus a great length of time is often suffered to elapse before any such examination is made as can with certainty lead to a discovery.

This proves often, in its consequences, highly distressful, and should therefore be as much as possible guarded against; for

strictures, by long continuance, become much more firm, as well as more extensive, than they were at first, by which they also become much more difficult to cure. Cases which at first would have yielded almost to the first attempt with bougies, are, by delay, often rendered so obstinate, that nothing will remove them but an accurate application of bougies continued for a great length of time.

Whenever there is cause, therefore, to suspect that strictures may exist, an examination should be made with bougies. But as patients themselves are apt to be deceived upon this point, practitioners should, in every instance, lead their attention towards it. In different parts of this work we shall have occasion to see that Gleet is frequently kept up by strictures: so that in all obstinate cases, and where no other evident cause for the discharge is perceived, a trial with bougies should be proposed. This, however, is seldom done; by which much unnecessary trouble, as well as loss of character, falls upon the practitioner,

tioner, while the patient is made to suffer a great deal of misery, which, with care, might have been prevented.

I have already had occasion to remark, that the variety of strictures which we are now considering is frequently the consequence of Gonorrhœa : but in what manner it is produced by Gonorrhœa is perhaps difficult to explain. It has been attributed chiefly to ulcers induced by that disease, and to inflammation.

At one period I was induced to suppose, chiefly from the information that I had obtained from books, that strictures were in most instances produced by ulcers. But from more frequent opportunities of observing the seat of Gonorrhœa after death, I am now convinced that ulcers very seldom take place in that disease ; by no means so frequently as strictures, the effect which they are supposed to produce. It sometimes indeed happens, that the membrane of the urethra covering strictures, is found in a state of tenderness, or of excoriation, but not completely ulcerated.

rated. Even this, however, appears to be the effect rather than the cause of the disease. It seems in a great measure to proceed from the acrimony of the matter which the strictures themselves produce. The urine being prevented by the strictures from passing freely off, a few drops of it always remains between the neck of the bladder and the seat of the disease, and thus, by remora, becoming acrid, a considerable degree of tenderness or excoriation accompanied with much heat in passing water never fail to ensue.

When real ulceration is met with in Gonorrhœa, it is in most instances, I believe, produced by the rupture of blood vessels. If it be not at the very point of the passage, ulcers in the urethra never proceed from the matter of Lues Venerea. Now we can scarcely imagine that any ulcer which the rupture of a blood-vessel in the urethra could probably produce, would be of such depth or magnitude as to be capable of producing any permanent strictures. Neither are hæmorrhages

rhages from the urethra frequent; nor have I found that strictures have been particularly apt to happen, even where hæmorrhages have taken place in an alarming degree.

I consider it, therefore, as decided, that strictures in the urethra seldom or never proceed from ulcers. Inflammation, when violent, may certainly tend to produce them; and I think several instances have fallen within my own observation where this actually happened. I do not suppose, however, that this is such a frequent cause of strictures as is commonly imagined, nor do I agree with those who think that injections often produce them.

It being observed, that strictures were, in some instances, induced by inflammation, and injections being supposed, by those who are prejudiced against them, very apt to inflame the urethra, it was long ago asserted, and has since by many been believed, that strictures are more frequently produced by injections than by any other cause. This, indeed, is held forth

forth as the most important objection to the use of injections, and were it in any degree well-founded, I admit that it would be a strong reason for our laying this remedy aside: for however desirable it may be to have Gonorrhœa quickly cured, and however efficacious injections for this purpose may be, no practitioner would advise them were it to be with the risk of inducing such a formidable disease as strictures in the urethra.

Where strong stimulating injections are unguardedly used, such a degree of inflammation may thus be induced as may excite the most obstinate strictures. But this is not the fault of the remedy, as I have elsewhere observed, and can only be considered as the effect of an improper use of it. We might with equal propriety condemn the use of some of our most effectual and safest medicines, merely from an over-dose of them having done harm.

Instead of injections being a frequent cause of strictures, I have much reason to think that they effectually tend to prevent them.

them. Although I have admitted that strictures are sometimes produced by severe degrees of inflammation, I do not consider it as frequent. Strictures I conceive to be most frequently the consequence of a state directly the reverse of inflammation. In a great proportion of cases they will be found to take place, where, either from no injection having been used, or from some other cause, the discharge has gone on to an unusual length; where all symptoms of inflammation were gone long before; and where nothing but Gleet remained. At least this has been very generally the result of my observation, and, I believe, it will be admitted by all who have paid attention to the point under consideration. I therefore conclude from this, as well as from the appearances which these parts exhibit on dissection, that this variety of obstruction proceeds most frequently from a state of morbid relaxation or debility, induced in these parts of the membrane of the urethra upon which the inflammation

tion at first fixes with violence, and from which the subsequent discharge is in a great measure produced.

Where stricture succeeds immediately to inflammation, it appears to be that variety of the disease in which the urethra is compressed, or tied, as it were, with a cord: but where it does not appear till the inflammation subsides, and the discharge has been of long duration, the substance of the urethra is found, at those parts where the strictures exist, to be spongy, soft, and prominent, bearing every mark of having completely lost its tone.

The existence of this variety of stricture being ascertained, and it will not be confounded with any other disease where the observations contained in the preceding parts of this section are kept in view, our next object is to fix upon the method of cure.

While the opinion prevailed of strictures being most frequently produced by ulcers in the urethra, as this led to the suspicion of their being connected with Lues Venerea, mercury was advised in almost

most every instance. Mercurial ointment was regularly rubbed upon the seat of the disease, in order to dissolve the cause of the obstruction, and the patient was put under a salivation, with a view to the safety of his constitution.

As this was the prevailing practice of our best surgeons, when I entered upon business, not only here, but in other parts of Europe, I was necessarily led to adopt it; but later experience having shewn that mercury is never necessary in the cure of strictures, I have now, for many years past, laid it altogether aside. Nay, I readily own that, I never knew any advantage derived from it, while in many instances, when long persisted in, it evidently did harm.

It will not be imagined, that during this late period of time, mercury was ever alone depended upon for the removal of strictures in the urethra. Bougies were then very generally employed; but mercury, for the reason that I have given, was always advised along with them.

Bougies

Bougies had long been known to practitioners, but they were so coarsely formed, and their application so little understood, that scarcely any advantage was derived from them, till Mr Daran, about sixty years ago, brought them into more general notice. By forming them with care, and introducing them with address, Mr Daran had the credit of giving us the only remedy upon which we can place any dependence for the cure of strictures. At least we are certainly in a great measure indebted to him for bringing them into general use.

It is true that Mr Daran attributed virtues to his bougies which they did not possess. Being much interested in the sale of them, he wished to throw a mystery over their composition. They acted chiefly, he said, by their suppurative quality: in consequence of which, and by the great discharge of matter which they produced, tumours, and other causes of obstruction in the urethra, were, he alleged, dissolved by them, which could never otherwise have

have been removed. The confidence with which this was asserted, by a man of Mr Daran's experience, and the considerable discharge of purulent-like matter which usually accompanies the use of bougies, gave weight to an opinion which, from this cause alone, came at last to be generally admitted.

We now know, however, that it is not by exciting a discharge of matter that bougies act in the cure of strictures. Even the mildest bougie we can employ, when kept in the urethra for an hour or two, is covered with a kind of matter on being withdrawn; but this happens as readily where the urethra is sound as when it is obstructed in various places, and it seems to proceed entirely from the natural mucus of the passage being increased in quantity, and somewhat altered in appearance, by the irritation excited by the bougie.

Even admitting the obstructed parts to be more particularly acted upon, and a greater discharge of matter excited from

them than from the other parts of the urethra, and which Mr Daran asserted to be the case under his management of the bougie, still this would not account for the removal of excrescences; for we know, from daily observation, that the whole surface of excrescences of a similar nature in other parts of the body, may be kept in a state of complete ulceration, and a large quantity of matter discharged from them for a great length of time, without their being perceptibly lessened in bulk.

Bougies, in the cure of these strictures, seem to act solely by pressure, and by the support which they afford to the diseased parts. If a bougie, of sufficient firmness, exactly or nearly the size of the urethra in its contracted state, be passed at first, and others of a larger size afterwards introduced, we know from experience, that if done with caution, no harm will ensue, and that the stricture for which it was employed will thus, in a gradual manner, be removed, merely by the pressure of the bougie.

In

In this view, our chief object in the forming of bougies should be to give them a firmness sufficient to afford support to the parts which we wish to compress, and a smoothness and flexibility that admits of their being introduced and retained in the urethra with the greatest possible ease.

Numbers 34, 35, 36, and 37, in the Appendix, contain prescriptions for bougies of different colours and consistences, with some directions for preparing them; but the exact formation of bougies being a matter of the first importance, and this being only to be acquired by constant practice, it is better for surgeons to procure them from those whose sole profession it is to make them, than to attempt to form them themselves.

Besides the forms of plasters mentioned in these prescriptions, other articles have been employed for the construction of bougies, particularly cat-gut and resina elastica. Of these the latter is by much the best, and for all the smaller sizes of

bougies I now find it to be preferable to the best plasters of the common kind. Even when of the smallest size it can be made of such a degree of firmness that it may be pushed with considerable force, which cannot be done with the smaller bougies of the common kind, which are apt to bend, and to become twisted, although introduced with much care and attention.

The great expence of elastic bougies has hitherto prevented them from being so generally used as they ought to be: besides, they were at first made so soft that they nearly dissolved in the urethra on being allowed to remain in it for the space of an hour or two; but this fault is now so entirely removed, that I have known them remain inserted for seven or eight hours at once, and yet as firm on being withdrawn as when first introduced. This renders the elastic gum a valuable article, not only for bougies, but flexible catheters.

This

This resin has one very essential advantage over every composition that has yet been employed for bougies. It does not crack or break while in the urethra, however frequently it may be introduced. When the common bougies are prepared with attention, and the composition of which they are formed not too much boiled, they may sometimes be used two or three times with safety; but, for the most part, they cannot with propriety be introduced more than once. Nay, on remaining an hour or two in the passage, they are often so much cracked as to excite a good deal of irritation and pain even on their first introduction; insomuch that I have met with different instances of patients being deterred by this cause alone from using bougies, the irritation which they excited being so great as to be quite insupportable; while, on having recourse to those formed of *resina elastica*, they were found to give no kind of uneasiness.

T 3

These

These bougies are formed of fine silk, dipped in the resin dissolved in æther. They were first invented by Mr Thedn of Berlin, and are now made by different artists in this as well as other countries, but the best that we receive are made in Paris. There is cause, however, to regret, that the art of forming them is as yet confined to a very few, so that our supplies have hitherto been both scarce and uncertain.

In the use of bougies the following are the points which more particularly merit attention :

1. They should be provided in such numbers, and of such variety of sizes, that there may be no doubt of as many being always at hand as in any case may be required.

2. On proceeding to the use of the first bougie, care should be taken to fix upon one of such a size as will probably pass without exciting much pain. It is better at first to have it smaller than might be made

made to pass, than afterwards to be obliged to withdraw it. Of this we may in general judge by the size of stream in which the urine is observed to flow. It is often indeed found to be forked, and sometimes flattened, owing to the form and nature of the stricture, but, with some attention to this circumstance, we may, for the most part, be determined in the size of bougie that will answer.

3. The patient should be placed in such a posture as tends in the most effectual manner to relax the urethra. He may either be made to stand, with his thighs separated, and his body bent gently forward, or he may be laid upon his back, with his thighs not only separated, but raised. He ought, on no account, to be seated. In sitting the urethra is apt to be so much compressed that no space is left for the passage of a bougie. I have known several attempts to pass a bougie prove unsuccessful from this cause alone.

4. The surgeon being seated on the right side of the patient, should grasp the penis with his left hand, and draw it gently forward at the same time, so as to stretch the urethra to such a degree as may prevent it from catching the point of the bougie. With the bougie, previously well oiled, in his right hand, he should insert the point of it into the urethra, when it must be passed slowly, though firmly on, till it meets with some resistance. Neither should he desist at once on the stricture being met with. It answers better to continue to push on the bougie with a due degree of firmness, than to withdraw it immediately, as is often done. The first application of a bougie to the stricture is very apt to excite irritation and spasm. In this case we sometimes succeed best by withdrawing the bougie, and passing it again in the course of a short time; but for the most part it answers better to push it on at first.

5. A knowledge of the force that may with safety be employed in passing a bougie can only be acquired by experience. The less violence that is done to the urethra, or to the seat of the stricture, the better. It cannot, in some cases, be done without pain, but it should never be made to force a discharge of blood. When blood comes away, the bougie should be instantly withdrawn: for when this takes place, we may always know that some parts have been injured which ought not to have suffered, and by continuing to force on the bougie, that there is much risk of its forming a new passage for itself.

6. The distress arising from a new opening formed by a bougie is commonly so great, that nothing should be omitted that can in any way tend to prevent it. When there is cause to suspect, from the quantity of blood discharged, that the membrane of the urethra is injured, the bougie should not be again introduced for several days;

days; not till there is reason to suppose that the wound in the urethra is healed, for, till then, it is obvious that it would be very apt to renew or increase the injury.

7. As bougies should all be of a conical form, they should not be pushed farther at first than freely through the first stricture, otherwise the contracted part is apt to be torn open with too much force. It answers better to proceed slowly, and to increase the size of the bougie, or to push one of the same size farther on, in such a manner as may avoid every risk of injuring the membrane of the urethra.

It is true that a cure is sometimes obtained where bougies have been introduced with much violence; where violent pain, accompanied with hæmorrhagy, has been excited: but this is a practice, which, for the reasons I have mentioned, ought not to be imitated.

8. That

8. The bougie being passed, means must be employed to prevent it from slipping entirely into the bladder, as well as for retaining it at the depth to which it is inserted. We obtain the first of these objects by bending the end of the bougie, which, for this purpose, should be left at least half an inch out of the urethra; and the usual method of retaining a bougie in its place is, by tying a piece of soft cotton thread to the end of it, and fixing it with this, either directly to the penis, by passing it once or twice round behind the glans, or connecting it to the circular belt of a common suspensory bandage. But the most effectual method, as well as the easiest, which I have tried, is fitting the penis with a small bag or pouch of cotton or linen. The bougie being introduced with its end bent down, the bag is put over the penis, and being fixed with two pieces of tape to a circular belt round the body, the bougie is in this manner easily retained.

Common

Common bougies being of no great value, may be cut of such a length as to leave half an inch or so out of the urethra, for the purpose of bending in the manner I have mentioned; but those of the elastic gum should be kept of every variety of length, from three or four inches to nine or ten; and being easily formed with a knob at the large end, they are thus, in the most certain manner, prevented from slipping in.

9. When this precaution has been neglected, and the bougie thereby allowed to slip completely into the urethra, it is sometimes, by the awkward attempts of the patient, forced altogether into the bladder.

In this situation it cannot be removed but by cutting into the bladder, as is done in the operation of lithotomy, so as to extract it with forceps. But while the bougie continues in any part of the urethra it may be taken out by an operation of much less importance and hazard.

When

When the end of the bougie can be seen, it may with some care and attention be laid hold of with a small hook, or with narrow-bladed forceps, such as are used for extracting stones that fix near to the end of the urethra. But when it has passed to such a depth that it cannot be perceived, this method of extraction will not succeed.

In this case it can only be got out by cutting upon it directly into the urethra. The skin should be first drawn back, when a cut should be made through the teguments and urethra at once, half an inch or thereby in length, when, if the end of the bougie can be laid hold of, it may be taken out at this opening; or if this cannot be done, it may be pushed forward till the end of it passes out at the end of the urethra. This may be done either with small forceps or pliers, or by sticking a pin into the bougie at the opening and pushing it slowly on. The wound for the most part heals easily.

10. The circumstance which next requires attention in the use of bougies is, the time they should be allowed to remain in the urethra, and the frequency with which they should be introduced.

As bougies act, perhaps entirely in the cure of strictures by the pressure which they afford, and prove chiefly useful by the total change of structure which they induce in the parts to which they are applied, they must necessarily require a considerable time to prove effectual. The longer, therefore, that they are retained in the urethra, the sooner will this be accomplished. But while we attend to the removal of the stricture, care must be taken that the bougies should not be allowed to excite too much irritation. This, indeed, is the circumstance by which we ought to be chiefly directed. It may be laid down as a general rule, that bougies may be retained in the urethra as long as they do not excite pain or irritation; while, in every instance, they should be withdrawn as soon as they produce much pain.

At

At first they can seldom be allowed to remain longer than half an hour at once; but on the urethra being for some time accustomed to receive them, they may, for the most part, be left in it for several hours; and this may be repeated once and again during the course of the day.

11. During the time that bougies remain in the urethra the patient should be prevented from walking or moving more than is necessary. This seldom meets with sufficient strictness, by which many are prevented from deriving that advantage from bougies which otherwise they would receive.

In walking with a bougie in the urethra the irritation induced by it is commonly severe; especially when common bougies are employed. The motion in walking is apt to crack and break the plaster of which bougies are formed, which renders them rough and unequal, which never fails to do much harm.

12. That

12. That we may obtain the advantage of perfect rest while bougies are introduced, we are advised by many to employ them only when the patient goes to bed, and to allow them to remain in the passage during the night. This may answer when the patient is not liable to nocturnal erections, but where these are frequent it should not be permitted. I have known several instances of much pain and inflammation being induced by it. In some circumstances it may be more inconvenient to apply bougies during the day, but it may at all times be done with more safety.

13. That bougies may continue as long as possible in the urethra, some have advised, that the patient should be allowed to void urine while they remain in it. I have known it done and no harm ensue, where the urine was passed slowly, and with much caution: but I have also known it do much harm, and as the trouble of introducing the bougie a second time is
not

not equal to the hazard of allowing it to remain, I always advise it to be withdrawn when urine is to be passed.

Besides the temporary pain and inflammation which inattention to this circumstance is apt to induce, I have known it terminate in very distressful spasmodic affections of the urethra, which afterwards continued to be so, even after the original strictures were removed.

14. By a slow and regularly gradual increase being given to the bougie, strictures in a great proportion of cases may at last be removed; but before the first stricture is entirely destroyed, it is always proper to push forward the bougie, to discover whether others exist or not. It is better, however, not to make the attempt till the opening through the first is considerably enlarged, when we more readily and with more certainty succeed.

All other strictures that are discovered must be managed in the same manner with the first; the bougie must, if possible, be

made to pass them all, and the size afterwards increased gradually till the urethra is opened to its complete natural size.

15. In passing bougies for this purpose, it has been a point in dispute whether they should be carried the length of the bladder, and allowed to remain in it or not. I am decidedly of opinion that they should be passed completely into the bladder as soon as this can be done, in order to discover the utmost extent of the strictures; but I also think that they should never be allowed to remain in it. The common bougies are so apt to crack, and pieces of the plaster to fall off, that this might very possibly happen from their being immersed in urine; and we all know, that if a particle should drop, not small enough to pass off with the urine, that it would probably serve as a nucleus for a stone. This would not so readily happen with bougies of elastic gum; but even these, where there is so much hazard, should not be trusted, especially as it is not necessary;
for

for it is found upon dissection, that strictures are always anterior to the prostate gland. They are often in the membranous part of the urethra; but they have, perhaps, never been met with in the prostate gland itself, I mean in the urethra as it passes through this gland.

It must be admitted that the urine is often obstructed by disease in this gland; by inflammation, as well as by a more indolent kind of swelling, to which, as I have elsewhere had occasion to remark, this gland is sometimes liable. But this variety of obstruction, instead of being removed by bougies, is always hurt by them. We are sometimes under the necessity of passing a catheter, even during an inflamed state of the prostate gland; but this should only be done in cases of the most urgent necessity, for drawing off the urine when completely suppressed. When the gland has been for some time swelled in such a manner as to create a stoppage to the flow of urine, bougies never remove it, while, by the irritation

which they excite, they never fail to do harm. Of this I have now met with such a number of instances, in which either from the anxiety of the patient, or want of experience in the practitioner, such mischief has in this situation been done by bougies, that I think it right in strong terms to speak of it. In one case such violence of inflammation ensued, that the patient died on the third day evidently from this alone; and in others this imprudent application of bougies in a diseased state of the prostate gland, has hastened the progress of that disease, and added greatly to the distressful feelings of the patient.

16. Besides the length of time which bougies should be kept inserted daily, it is an object of importance to determine at what period they may with safety be laid aside. This, I must acknowledge, is difficult to do, as it depends upon circumstances with which it is impossible at all times to be acquainted. Even where strictures are so completely removed that bougies pass

pass with ease, and the urine is voided in a full stream, the disease is apt to recur if the bougies be too soon left off. They should, in every instance, be worn for a considerable time after all appearances of stricture are gone, and the more obstinate the disease has been, the longer should they be continued.

Even after a patient considers himself as so entirely well that he may conceive the farther use of bougies to be unnecessary, still he should at all times have them in his possession, so as to be able, on the least return of obstruction, instantly to employ them. This is a precaution not often adverted to either by practitioners or patients, but which should never be disregarded by any who have suffered in this manner; and I think it the more necessary to insist upon it, from having observed, in various instances, the most distressful consequences to ensue from a neglect of it. It is particularly proper for all who have suffered in this manner, when they go upon a journey, to be well pro-

vided with bougies ; for when from home they cannot always meet with them, while, at the same time, they are more exposed to the various causes most apt to excite a return of the disease ; particularly exposure to cold and dampness ; much fatigue, whether on foot, horseback, or in a carriage ; and excess in wine and ardent spirits.

All of these causes tend with such certainty to induce a return of symptoms of this kind, that I have seldom known them fail where people have been much exposed to them ; and, in a great proportion of cases, the effect is perceived soon after their application. I have known a person, who, after being completely cured of strictures for several years, has been suddenly seized with a very hazardous and painful return of it, in the course of an hour or two after being much exposed to a cold east wind. It is particularly apt to occur from violent exertion on horseback, and from being overheated with wine ; more especially

especially from excess in port and other strong wines.

A return of stricture is also apt to arise from the urine being too long retained after a desire takes place to pass it. This should always be guarded against; but I also think it right to mention, that patients sometimes err in getting into the habit of voiding urine too frequently. By yielding immediately to every impulse, such a habit takes place, that they are apt, from this cause alone, to continue during life to pass it every hour or two. This proves not only extremely troublesome, but it also tends to induce a contracted state of the cavity of the bladder, together with a thickening of its coats; its full distention, which naturally should occur from time to time, being thereby prevented. Hence it is a matter of no small importance for patients in this situation to observe as just a medium as is in their power between the two extremes that I have mentioned.

On the least return of stricture being perceived, whatever the cause may be, a bougie should be introduced. The patient, if he is plethoric, should lose blood in proportion to his strength; his bowels should be opened with a gentle laxative, or with a clyster; and he should be kept in bed till the violence of the disease is removed. In this manner I have known the most violent attack soon carried off, while, from treating them with inattention, even the most trifling symptoms have become severe, and in the highest degree obstinate.

The sudden and unexpected manner in which patients are often attacked with a return of strictures, has given cause to suspect that in such instances they must proceed from spasm. But the obstinacy with which they often continue, as well as every other circumstance that attends them, renders it obvious, that in a great proportion of cases they proceed from causes of a more permanent nature than spasm is commonly found to be.

17. We have hitherto been supposing that the strictures are such as to permit a bougie to be passed with little difficulty ; in which case, no doubt can be entertained of our being able, by perseverance, either to accomplish a cure, or to afford at least very effectual relief, and to prevent any alarming obstruction to the passage of the urine ; for however bad a stricture may be, if bougies of a small size can be passed at first, we may very commonly be able, as I have already observed, in a gradual manner to introduce those of a larger size. But frequently, either from the passage being contracted to a very small size, or from the stricture being altogether on one side of the urethra, by which the passage is thrown over to the opposite side, after many attempts we find no progress made, or if any thing is gained, it is so inconsiderable as to afford no kind of relief. This proves always the cause of much anxiety to the patient, and is apt to dispose practitioners not much versant in this branch of business to desist from further

ther trials : considering the disease to be incurable, they prescribe a course of palliatives, which, for the most part, avail little, while bougies, the only remedy from which advantage could be looked for, is deserted.

This ought never to be done, at least it should never come on the part of the practitioner, nor can any thing warrant the measure but the patient himself being determined against the farther application of bougies. This, from impatience and disappointment, is apt to happen ; but it ought at all times to be as much as possible resisted. Even in the most obstinate obstruction that occurs, if the passage be not altogether or nearly obliterated, an expert surgeon will scarcely fail, if he be not prevented by the impatience or timidity of his patient from persevering for a due length of time.

18. When there is cause to suspect that the passage is thrown over to one side of the urethra, by the stricture being fixed
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in the other, a point in which we may sometimes be determined by external examination with the fingers, and at other times by the feelings of the patient, the extremity of the bougie should be slightly curved or bent before being inserted, and the point of it being turned towards that side where the passage is understood to be, if carried on in this direction we will sometimes succeed, when various attempts have failed in the usual manner. It will be readily supposed that the curvature given to the bougie must be very inconsiderable; but even the slightest will sometimes give it the direction which we wish it to take, while it does not prevent it from passing with ease along the urethra.

19. In passing a bougie it should be kept firm between the finger and thumb of the right hand, and pushed gradually forward till it reaches the stricture; but when it has got this length, it commonly answers better to twirl it slowly between the finger and thumb, taking care to push it gently

forward at the same time. At least I often succeed in this manner, when the usual method of pushing it directly on has failed.

20. I have already observed that no more force should be used in the introduction of bougies than is merely necessary for making them pass; but it is proper to remark, that in the hands of a surgeon of experience, much more force may with safety be applied than others can with propriety venture to employ. By pushing a bougie slowly and gradually forward, we often force it through strictures without any discharge of blood taking place, while much pain and laceration is sometimes produced even by less violence applied in a hurried or quick manner.

21. When we find upon trial, that a small bougie, nearly the size of the opening, is made to pass, no force will be afterwards required, if the bougies be gradually increased in size. But when we find,

find, upon repeated trials, that the passage cannot be discovered, and when we therefore mean to employ a greater force, bougies of greater strength should be used. Small sized bougies, particularly those of the common kind, are so easily bent that they should never be employed where much force is required. I have known even surgeons of experience push forward bougies of this kind, and concluding that they had passed the stricture, have carried them on till they imagined they had nearly reached the bladder, when, on being withdrawn, they were twisted up in the form of a cork-screw, having never gone farther than the stricture.

With a firm, well-polished bougie of elastic gum, well rounded at the end, and not smaller than a crow's quill, such a force may be applied as will often succeed when no advantage can be derived from those of a smaller size; nor should we desist although our first trials have proved unsuccessful, for strictures are often removed

moved by perseverance when no advantage was gained at first.

I have reason indeed to imagine, from what has happened in the course of my own experience, that few cases will occur which may not ultimately be cured by bougies. But when they do, in what manner are we to proceed? When every trial that we dare make with bougies fails, what are we to do? This, it is evident, must depend entirely upon the state of the parts affected, and upon the degree of obstruction which takes place.

If there is still such an opening left as admits the urine to pass with tolerable ease, I would advise nothing farther to be done. A patient, in such a situation, had better submit to the inconvenience of passing it slowly, and even frequently, than to the operation of removing the stricture, which consists in laying the obstructed part of the urethra open, and in the frequent introduction of a bougie while the process of reunion is taking place between the divided parts. But this operation is so highly important ;

portant ; it is attended with so much pain, and with such uncertain success, that no practitioner of experience will advise it while the urine is not almost entirely obstructed ; and long before this commonly happens, the situation of the parts between the stricture and the bladder is such as to induce the patient more readily to submit to any necessary operation than he ever would have done in a more early stage of the disease. Whenever the stricture excites much difficulty to the flow of urine, that part of the urethra lying between the stricture and bladder is necessarily distended on every attempt to pass it. This frequent distention at last weakens the lining membrane of the urethra : the urine is at first in small quantities, afterwards in larger, forced into the surrounding cellular substance : this forming one or more small tumours, at last bursts out through a corresponding number of openings, either in the perineum, or in the cellular part of the scrotum. At least this is the usual progress of
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of such tumours when the strictures in the urethra by which they were produced cannot be removed.

This is the most frequent cause of the disease we have already had occasion to mention, *Fistula in Perineo*, in which the urine continues to flow out at the newly formed openings, as long as the strictures in the urethra are allowed to remain, and which accordingly, as I have already observed, makes the patient easily submit to any operation that may be requisite for their removal. In such circumstances nothing will answer if the diseased parts be not freely laid open. A staff being introduced to the depth of the stricture, and a small probe passed in at one of the openings, and carried to the opposite side of the stricture, the intermediate space should be laid open by an incision in the direction of the urethra. In this manner the cause of obstruction will be discovered and removed, and the other sinuses communicating with the urethra being likewise laid open, a cure, even of the worst cases that

that occur, may thus be frequently obtained. To enter more fully into the consideration of this operation, and of the after treatment of the fores, would here be improper, as it would extend this article to an unnecessary length. It could not be done with precision and clearness without entering upon the general doctrine of fistula, and upon the different methods of cure that have been proposed for it; and as this has been done in a different work, I must now refer to what I had then occasion to say upon it *.

Before concluding the consideration of strictures in the urethra, I think it necessary to notice a method of cure that has been proposed where we fail in the introduction of bougies; the repeated introduction of caustic into the urethra, with the view of destroying the cause by which the stricture is produced.

This practice prevailed upwards of a hundred years ago, but being both hazardous and uncertain, it appears soon to

* Vide System of Surgery, chapters xxxiii and xxxviii.

have been relinquished. It has lately, however, been revived, or rather an attempt has been made for reviving it, by the late Mr Hunter of London, and still more lately by Mr Home. But as I consider the practice as attended with danger, and not likely often to answer the purpose, I shall briefly state what leads me to form this opinion, not only that others may be prevented from going hurriedly into it, but as the means of bringing out farther information with regard to it; and if future experience shall shew, that caustic can be employed as a safe and effectual remedy in the removal of strictures, none will be more anxious than I shall be to enter freely into the practice, and in this manner to avow the error which in that case it must appear that I have at this time fallen into.

The introduction of caustic into the urethra must prove hazardous from two circumstances; our not being able, even with all the pains that we can take, to apply it to the stricture alone, without injuring

juring the contiguous parts of the urethra ; and the risk which there must always be of some small portion of the caustic breaking off and resting in the passage.

Mr Hunter has indeed invented a very neat apparatus for the introduction of caustic. It consists of a silver tube, open at both ends, nearly the thickness of a common catheter, with a port-crayon, somewhat longer than the tube, into which the caustic is fixed. A stillette, with a perfectly round end, is first passed through the tube, and if it be exactly fitted to the end of it, the two together may be carried with ease along the urethra till they come in contact with the stricture, when the stillette is to be withdrawn, and the port-crayon, with the caustic fixed in it, introduced. The caustic being applied to the stricture for about the space of a minute, must be withdrawn along with the instrument, and this must be repeated every two or three days till the cause of obstruction is removed.

This, from description, appears perfectly simple, and of easy execution; but notwithstanding the ingenuity of the invention, it is obviously liable to the two objections which I have mentioned, which may also be said of the method of conducting the caustic by fixing it in the end of a bougie. We know, even where parts are uncovered, and therefore immediately under view, that it is difficult to destroy them with caustic, without injuring the contiguous sound parts. In the urethra, therefore, where we receive no advantage from the eye, and where the slightest deviation of the instrument may fix the caustic upon the urethra itself instead of the stricture, there must evidently be much hazard from this circumstance alone, independent of the chance of hurting the contiguous parts merely by the spreading of the caustic, admitting it to be applied with all manner of exactness.

Besides, as the size of caustic that can be passed in either of these ways is exceedingly small, there must always be
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some hazard of its slipping out or breaking off, from which the highest degree of distress would ensue; for it could not be extracted, nor could dilution be employed with such effect as to prevent it from doing a great deal of mischief.

Another very important objection occurs to this practice. A great proportion of strictures are seated beyond the curve of the urethra, to which an instrument so straight as a tube acting as the conductor of another body ought to be, cannot be carried. But Mr Hunter, foreseeing the difficulty, has endeavoured to remove it by proposing that the end of the tube should be flexible, and of the same form with the common flexible catheter of silver. But this, while it apparently adds to the ingenuity of the invention, renders it evidently more hazardous. The small point of caustic contained in the portcrayon will be more apt to be broken or loosened in passing through a curved tube than through a straight one, while it will

not be possible to apply it to any one point with such firmness and steadiness.

But even admitting that caustic may with safety be conveyed to the stricture, if the disease does not yield to bougies, the obstruction will generally be found to be extensive, and the quantity of caustic necessary for removing it so great, that the contiguous sound parts of the passage would be much injured, whatever care and attention should be employed in the application of such an active remedy. On these accounts, it would appear, that for the removal of strictures in the urethra, the application of caustic is either unnecessary, or in a very considerable degree unsafe, and at the same time of very uncertain effect. Where strictures are slight, a degree of force may be used with bougies, sufficient for removing them. Whenever this can be done, none will doubt of the propriety of preferring them to caustic; and when strictures occupy such an extent in the urethra as to render our attempts with bougies unsuccessful, there

there will be little or no room to hope that caustic will answer better. In other parts of the body we all know how difficult it is to remove even the callous edges of an ulcer with caustic. Nay, that new parts seem often to form below before the eschar produced by a previous application of the caustic has come off. I have no hesitation, therefore, in saying, that in similar affections of the urethra, proceeding to the extent which we here suppose them to have done, that caustic would either be altogether inadequate for the purpose, or that it must be applied in such quantities as to be productive of much hazard.

In all such circumstances, it appears to me to be preferable to let the disease take its usual course. The worst that can probably happen, is the formation of sinuses behind the strictures, and the discharge of urine from the openings which these produce. Few patients will long submit to this, if a remedy can be obtained; but I consider the cure of this state of the dis-

ease, by the mode of treatment already pointed out, as more certain, while it is obviously much less hazardous than the means proposed for preventing it with caustic.

I have here continued an observation inserted in the first edition of this work, that "The worst that can probably happen in strictures, is the formation of sinusses behind the seat of the obstruction, and the discharge of urine from the openings which these produce." But, although this in a great proportion of cases is correctly true, yet instances occasionally occur of still more distressful consequences from strictures. Since the first edition of this work was published, I have met with no less than three cases, in all of which the cavity of the urethra was almost completely obliterated, from the neck of the bladder forward to the seat of the disease, which in all the three appeared to be directly behind the scrotum.

In all of them there was much reason to think, that a timely and proper use of bougies

bougies would have proved effectual, but this being neglected, the passage in none of them would admit a bougie larger than a hog's bristle. No advantage could accrue from this. Caustic, although used with much perseverance in all of them, made no impression; so that the patients are now living in great distress, with no other prospect of relief than of that which they derive from large doses of opiates; a misfortune which should serve as a warning to all who are attacked with strictures in the urethra, to employ bougies early, and never to desist from the use of them while any degree of obstruction is perceived.

SECTION V.

Of deranged Sensations in the Bladder, Urethra, and contiguous Parts.

AS soon as the leading symptoms of Gonorrhœa become moderate, all the others usually abate, and the patient, for the most part, considers the cure as complete soon after the discharge leaves him.

This, however, is not always the case, for it sometimes happens that much distress is experienced, long after the discharge is gone; and as the symptoms which take place in this state of the disease are of a nature which cannot be referred to any particular head, I have judged it proper to speak of them in a separate section.

Without any previous pain, a patient, who, from the discharge and other symptoms

toms of Gonorrhœa having ceased, has cause to suppose that his cure is complete, will be suddenly seized with uneasiness over his loins; painful feelings over all the region of the bladder, particularly about the neck of it; a sense of weariness in the regions of the kidneys, which sometimes becomes much pained; a considerable degree of uneasiness over the whole course of the urethra, particularly about the glans, and a painful sensation of rolling, and other unusual motions, in the testes.

In some, these symptoms, which seem to be confined to the organs of urine and generation, take place either in whole or in part by themselves. In others, they are conjoined with affections of other parts, chiefly with those of the stomach and alimentary canal. In one case they were accompanied with regular attacks of cholic, which, from the pain being violent, there was cause to suppose were produced by inflammation, but which always subsided immediately on the symptoms being

ing removed by which it seemed to be induced. In different instances I have known sickness and vomiting succeed to that painful uneasiness to which patients in this situation are sometimes liable in the kidneys.

Distressful feelings frequently take place in the rectum, which give cause to suspect, that in some instances they proceed from piles, and in others from tumours in the end of the gut. A painful tenesmus often accompanies this set of symptoms.

In some we meet with almost every symptom usually produced by stone in the bladder. A dull, heavy pain is felt at the neck of the bladder, which spreads along the urethra, and fixes upon the glans. The patient is distressed with a frequent desire to pass water, and it often stops suddenly when coming off in a full stream.

In a few cases symptoms of paralysis occur, both in the bladder and urethra. The patient at one time finding it difficult, or even impossible, to force the urine out of the bladder, while in others it runs off

off in drops, without his being able to retain it.

These unequal states of the power of passing and retaining the urine sometimes occur alternately, several times in the course of the same day; while at times one of them will continue for several days together, and at last will disappear suddenly, after having resisted every remedy that had been employed.

It will readily be supposed, however, that all of these symptoms will not probably occur at the same time in the same patient, but every practitioner must have met with all of them in different patients.

At the same time that they take place with some variety, we likewise meet with them in very different degrees. In some they are so slight as merely to excite a trifling degree of uneasiness, and so transient, that they come and go frequently in the course of the same day; while, in others, they are so fixed and permanent that the patient remains in a state of constant distress,

tress, and to such a degree as he is scarcely able to support.

In women, the bladder, kidneys, and abdominal viscera, are equally liable to be affected as in men; and they are also apt to be distressed with uneasiness about the neck of the womb, and bearing-down pains, stretching to the thighs.

Even in the most firm-minded people the symptoms that I have described prove frequently very distressful; but where the mind is weak, and the imagination easily affected, they arrive in some instances at the most alarming height. In whatever degree they may appear, they are attributed to the preceding disease having either been improperly treated, or not completely cured; and when this happens in a mind prone to fears and anxiety, the distress which they are apt to excite, is in some instances so extreme, as can scarcely from such a cause be supposed to exist. Whether a course of mercury be advisable or not, the patient is seldom satisfied till this medicine be prescribed; for he is
always

always afraid that his constitution will be ruined if mercury is omitted. If this proves successful, or if he gets well when under it, he remains completely satisfied; but when this does not happen, as is the case most frequently, he then believes that he is incurable, and that his situation is desperate. Every variety of nostrum is now had recourse to: by the effect of these, and still more by the agony of mind under which he labours, his constitution at last begins to suffer; he gradually becomes weaker and emaciated; and if his life is prolonged, it is almost always a scene of anxious inquietude and distress.

The cause of all or any of these symptoms it is often impossible to explain. Were they to happen chiefly where the previous inflammation has run high, or where the patient, when under cure, had been particularly apt to indulge in venery, excess of wine, or bodily fatigue, one or other of these causes might tend to account for them. But this is by no means the case. They are met with as frequently where
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the disease has been of a mild nature, and where it was cured in an easy manner, as where the symptoms have been severe and obstinate. Where this takes place, we are apt to suppose that they are mostly, if not entirely, of an imaginary nature, and to treat them accordingly. This, to a certain degree, may be often proper, as it may fortify the mind of the patient against those ill-grounded fears to which he might otherwise be exposed; but we are not to suppose that symptoms of this description are always ideal, merely from our not being able to account for them, or from the previous Gonorrhœa having been of such a mild nature as we may imagine ought not to have produced them. I have met with instances of this, where the previous disease was exceedingly mild, and where no obvious affection of the parts was perceptible, and yet the violence of the distress in such a degree as kept the patients in a state of constant misery.

Many of the symptoms that I have enumerated are such as are produced by
tumours

tumours about the neck of the bladder, particularly by swelling of the prostate gland, and by a contracted state of the bladder itself. In such cases, the cause of the disease may often be discovered by examination with the finger in ano; but at present we are supposing that no organic affection of any kind can be perceived, an occurrence by no means uncommon, and in which I therefore conclude that the symptoms proceed from a deranged state of the nerves, produced by the previous disease in the urethra. I have accordingly arranged all of them under one general head of *Deranged Sensations*; nor is there cause, from the nature of the remedies that usually prove most successful, to treat of them separately, nearly the same course of treatment being found to answer in all of them.

Before proceeding to mention the remedies, I may observe, that although we cannot in any case say positively what will accomplish a cure, I can with certainty say what will not answer. I have

already remarked, that patients in this situation are apt to suspect that their symptoms proceed from the previous disease having been improperly treated. This leads them to imagine that a latent poison is still lurking in the constitution, and mercury being the only certain antidote for the venereal poison, they always insist upon this being prescribed. Some practitioners, still suspecting that *Gonorrhoea* and *Lues Venerea* proceed from the same infection, consider it necessary to prescribe mercury for all the consequences of each of these diseases, while others are readily prevailed upon, by the solicitation of their patients, to permit what they may suppose it would not be in their power to prevent. But from all the experience which I have had of it, I am clearly of opinion that in this situation no advantage is ever derived from mercury, while, in a great proportion of cases, it evidently does harm. By relaxing the constitution it renders it much more irritable than it was before, by which it tends to aggravate all such symptoms

symptoms as those that we are now considering.

The remedies upon which we chiefly depend are, blood-letting, opiates, warm bathing, blisters, cicuta, hyoscyamus, electricity, Jesuit's bark, and cold bathing.

When the constitution is already reduced and debilitated, blood-letting must necessarily be inadmissible; but whenever plethora takes place, as is sometimes the case, nothing proves more useful than blood-letting, both general and local, particularly the discharge of blood from the perineum and parts contiguous to the anus, by the application of leeches. In such circumstances it removes or lessens irritability with more certainty than any other remedy. Even where there has been cause to suspect a tendency to paralysis in the bladder and contiguous parts, leeches applied near to the seat of the disease have proved useful; nor need we ever hesitate to advise them where the patient is not much emaciated. But the remedy which here proves most universally useful is

opium. It not only soothes and allays the present distress, but when, by a well judged timely application, we can for two or three weeks together prevent the accession of pain, we in this manner often ensure a cure. It answers the purpose whether it be given by the mouth or in clysters, but it proves always most effectual when given in sufficient doses by the anus.

The external application of laudanum, and of anodyne balsam, in some cases affords relief, particularly when conjoined with æther. In those deranged sensations which sometimes occur in the perineum and about the neck of the bladder, immediate relief is often obtained by rubbing the parts affected with a mixture of warm laudanum and æther; and I have known a suppression of urine arising from this cause, relieved in the same manner.

When opiates fail, or when they disagree with the patient, the semicupium sometimes succeeds. Warm fomentations applied to the perineum, and over the loins, often prove useful; and the steams of
warm

warm vinegar, conveyed with attention to the parts affected, have likewise been used with advantage. The best article that we can employ in such cases for fomentations is a strong decoction of the heads of poppies.

Blisters, are perhaps the most effectual of all our external applications. It is chiefly, however, where the urethra seems to be the seat of the disease that they prove useful, and also where the neck of the bladder is become so weak as to be unable to retain the urine. In the former, blisters act with most advantage when applied to the perineum, and in the latter they should be applied to the loins. The most distressful sensations produced by this cause, and which for many years have obstinately resisted every other remedy, have in some instances been removed by the application of a blister to the perineum. In some cases one proves sufficient; but in others they require to be repeated once and again before all the symptoms disappear.

Upon the same principle with blisters, our being able to excite a return of the discharge after it has stopped, or after it has been diminished in quantity, has at times been productive of some benefit. This may be done by fomenting the penis and perineum, with warm water; the application of warm poultices to the perineum, and by a cautious use of bougies. The practice was probably suggested by the symptoms having in some instances been removed by the patient getting a fresh attack of Gonorrhœa from a new infection; different cases of which I have met with.

In all such instances, if the inflammation recently induced is considerable, the previous symptoms are thereby either much diminished in violence, or entirely removed. This would lead to the practice of exciting an inflamed state of the parts in a considerable degree, which bougies never fail to do, if covered with oil of turpentine, in which a small quantity of common resin is melted; but as much harm might be done by carrying the practice

tice too far, it should in every instance be managed with the greatest delicacy and care.

It may be proper to remark, that the introduction of stimulating bougies proves chiefly useful where the disease is confined to the urethra; although, in some cases, it has answered even where the bladder and kidneys have been affected.

Where the urine passes off involuntarily, blisters, as I have already observed, answer with most certainty when applied to the loins. This arises perhaps from the cause of the disease in these instances lying in the bladder itself: but, where it proceeds, as it may sometimes do, from a tendency to paralysis in the urethra and muscles connected with it, blisters prove most useful when applied to the perineum.

Where the urine passes off in this manner, balsam of copaiba, and other astringents are usually given. They are supposed to act chiefly by restoring the tone of such parts as appear to be relaxed and

weakened, and which it is imagined they must do, from their having a peculiar tendency to pass off by the organs of urine. In like manner the internal use of cantharides is prescribed, from an idea of this symptom depending, in every instance, on a loss of tone in the parts affected, and from our knowing, that in most cases, cantharides proves a powerful stimulus both to the kidneys and bladder.

All of these balsams, as well as the common turpentine, which are not essentially different, may in all such cases be used with safety. In some instances they may perhaps prove useful, and I do not imagine that they will ever do harm. This, however, cannot be said of the internal use of cantharides. In large quantities they act as a poison; and even where managed with caution, the principle of the practice, seems in such cases as we are now considering, to be doubtful; for as there is cause to suppose that the disease proceeds more frequently from too much irritability about the neck of the bladder
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and urethra, than from any deficiency of tone, there is reason to fear, that by increasing the sensibility of the parts affected, they would in many instances be more apt to do harm than good. It is therefore proper, previous to the internal exhibition of cantharides, to determine with accuracy whether the disease proceeds from weakness or morbid irritability. In the one case they may sometimes prove useful; in the other they will be apt to add to the violence of the disease.

Cicuta is frequently prescribed here; and when given to such extent as to act as an anodyne, it may sometimes prove useful. Upon the same principle, hyoscyamus may with propriety be given; but we have no reason to suppose that either this medicine or opium act in any other manner than as anodynes, in the cure. As no organic affection appears to take place, they cannot act by dissolving hard or enlarged parts. Any advantage derived from them will therefore be nearly in proportion to the anodyne effects which they produce; so
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that they may prove useful wherever opiates cannot be employed.

Electricity has been known to give temporary relief to symptoms of this kind; and it appears to answer best when taken in sparks from the parts chiefly affected, particularly from the perineum, and parts most contiguous to the neck of the bladder.

It is proper, however, to remark, that the same observations are applicable in using electricity that were made upon the internal exhibition of cantharides. Both of these remedies, as well as blisters to the loins, have been chiefly prescribed, where the urine passes off involuntarily, and they are advised upon the supposition of this symptom proceeding from paralysis of the neck of the bladder. But as there is cause to imagine that the frequent discharge of urine, with which patients in this situation are sometimes distressed, proceeds more from irritability in the neck of the bladder than from real weakness, there is reason to think that
electricity,

electricity, by increasing the sensibility of the part affected, which in some instances I have known it do, will rather tend to aggravate the complaint.

Blisters, whether applied to the loins or perineum, may prove useful, not merely by the discharge which they excite, but by the irritation which they produce upon the skin. We know that pain and irritability may often be removed from one part by exciting it in others. Of this we have frequent proofs in the application of blisters and other stimulants in deep-seated pain in the side, where immediate relief is often obtained as soon as the skin becomes warm and uneasy, and long before any vesications are produced. Sinapisms applied to the feet, have, in some instances, removed head-ach when every other remedy has failed. In like manner, blisters seem to operate when applied to the perineum for the removal of those sensations to which patients in this situation are sometimes liable. But electricity, as well as the internal use of cantharides, by
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tending to irritate the very parts in which the disease is seated, seem often to increase the violence of the symptom they were meant to remove.

Perseverance in the use of one or other of these remedies seldom fails to lessen or even entirely to remove the distress; but the symptoms being apt to recur, even after the patient considers himself as well, it becomes an important object both to the patient and practitioner that this should be prevented. With this view, we advise a liberal use of Peruvian bark and cold bathing. A free exhibition of bark should be prescribed, as soon as the pain and other symptoms begin to diminish, together with sea-bathing whenever it can be got. Where the patient does not live contiguous to the sea, cold water should be applied locally, both to the perineum and loins. Some advantage is derived from the parts being merely bathed in cold water, but it proves more effectual when forcibly dashed upon them.

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An involuntary discharge of urine which I have already had occasion to speak of, proves always troublesome; but the distress arising from this is trifling when compared with that which proceeds from the patient not being able to expel it. Even without inflammation, and where no cause of obstruction can be discovered in the urethra, a patient will sometimes find it impossible to pass a single drop. This, we no doubt often meet with from other causes; but it is also occasionally the effect of that irritability which Gonorrhœa sometimes excites over the whole organs of urine and generation.

In plethoric patients copious blood-letting should be advised. We sometimes excite an immediate flow of urine by the operation of a brisk purgative, particularly by that of a stimulating injection. Warm fomentations applied to the abdomen, over the perineum, sometimes prove successful; but our most effectual remedies are opiates and warm bathing. The whole body should be immersed in water,
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heated to the 95th or 96th degree of Fahrenheit's scale, and kept in it for the space of twenty minutes at least, and if immediately thereafter an opiate glyster is given, relief will commonly be obtained; but when this does not soon happen, particularly when the bladder is much distended, the water should without farther delay be drawn off with a catheter. In this situation no time should be lost. By delays we not only add to the temporary distress of the patient, but to the difficulty of passing the catheter, as well as to the real danger with which a total suppression of urine is at all times accompanied, from whatever cause it may arise.

In some cases the introduction of a bougie will answer the purpose; and as this gives less pain and irritation than a catheter, it should in the first instance always be preferred. One of the largest that will easily pass should be employed; and, after allowing it to remain in the bladder for a few minutes, the patient should endeavour to pass water instantly

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on the bougie being withdrawn. This should not be done with much force and pressure, otherwise the neck of the bladder and urethra are apt to contract instantly on the bougie being taken out; while the whole will pass completely off if it can be made to flow easily at first, along with the bougie.

When this our intention of employing bougies is frustrated, we are under the necessity of employing the catheter; and, as it is of much importance, in all such cases, to prevent irritation as far as it can possibly be done, catheters of *resina elastica* should be employed, instead of the common instrument of silver. It not only passes more easily, but when difficult to introduce, it may, in some instances, be proper to leave it for a day or two in the bladder, which can never, with propriety, be done with catheters of silver.

The practice of leaving catheters in the bladder is spoken of by some with much ease, and they advise it wherever any permanent stoppage occurs to the urine; but

I have in different instances seen so much mischief produced by it, that it is a measure I never advise but where much pain and difficulty is experienced on the introduction of a catheter. In most instances, more pain is produced by allowing the instrument to remain in the bladder than ever occurs from its being frequently passed. Besides the irritation which even the smoothest and softest instruments of this kind excite, they are apt to prove hurtful by incrustations of calculous matter forming upon them, in consequence of depositions from the urine. The urine of few people is so free of this kind of matter as to prevent a catheter, inserted into the bladder, from becoming rough with it in a very short space of time. This practice, therefore, should never be adopted but from real necessity; and in every instance where this shall happen, a preference, as I have already observed, should be given to catheters of *resina elastica*.

SECTION VI.

Of Swellings of the Testicles.

A SWELLING of one of the Testes is a frequent occurrence in Gonorrhœa. From the resemblance which in some circumstances it bears to a hernia, and from its being supposed to proceed from the running or humour in Gonorrhœa falling down upon the testes, it is usually termed a Hernia Humoralis.

In some instances both testicles swell. They seldom, however, swell both at once; but the swelling, on leaving one testicle, is very apt to go to the other; and when both have in this manner been affected, they sometimes swell alternately for a considerable time together. I have known this happen for the space of a year and upwards, where the patient, during the

whole period, was never completely free of the disease.

When the swelling has been of long duration, the pain becomes inconsiderable; but at first it is always severe. The first warning which a patient receives of it, is a very painful sensation in one of the testes, striking along the spermatic cord, up to the middle of his back. On examining the testis he finds it swelled, and so tender that he can scarcely bear it to be touched. He feels himself hot, and a general uneasiness prevails over his whole frame; particularly over his thighs and abdomen. Neither can he move without increasing the violence of every symptom.

At first the swelling is confined to the epididymis; the back part of the testicle feels hard and enlarged; but in a very short space of time, often in the course of an hour, the whole body of the testicle becomes swelled. In this state of the disease a difference is still perceptible between the testis itself and the epididymis.

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The latter is hard, and somewhat unequally so; being, for the most part, hardest and most prominent at the bottom: whereas a soft, uniform swelling prevails over all the anterior part of the testicle.

In the progress of the disease, indeed, even the testis itself becomes hard, and if the means employed for preventing it do not prove successful, the swelling of the epididymis and testis together, come to form a tumour of great magnitude, accompanied with a red, inflammatory appearance of the scrotum.

In this state of the disease, the pain is often intense, and accompanied with a very distressful rotatory motion of the testis. The skin is dry and parched; the tongue foul; thirst prevails; and the pulse is full, and quick. In short, every symptom takes place which usually attends a high degree of local inflammation.

There is no period of Gonorrhœa in which this affection of the testis does not occasionally supervene. It occurs in all stages of the disease; even towards the

end of it, when both the patient and surgeon are apt to consider the cure as nearly complete : and in some we find it take place where no cause can be assigned for it ; where neither the degree of the previous inflammation, nor the mode of life of the patient, were such as could in any satisfactory manner account for it.

It is proper, however, to remark, that swellings of the testis which take place in this manner, seem, for the most part, to be of a very different nature from those which occur during the virulent state of the disease, and while the inflammation in the urethra is considerable. The latter appear to be purely inflammatory. The disease proceeds more slowly to its height or acmé. It remains more permanently at the size to which it arrives, and it disappears more slowly than the others; which come to their utmost height, in some instances, in an hour or two from the first approach of the swelling, and again disappear with equal rapidity. These I conceive to be partly inflammatory, and that
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in part they proceed from that kind of sympathy which evidently subsists between the penis and testis, and which renders the one very apt to suffer from any disease with which the other may be affected.— And, that sympathy has much influence in exciting it is obvious, from the swelling being apt to leave one testis, as I have already observed, and to fix, perhaps instantly, upon the other.

As it is observed that the discharge in Gonorrhœa is apt to stop on the first appearance of a swelled testicle, this gave rise to the idea of the disease in the testis being produced by the matter falling down upon it from the urethra. It is now well known, however, that no communication subsists between the urethra and testes, by which matter can pass from the one to the other; nor does the appearance which a swelled testicle affords give reason to imagine that it proceeds from this cause. Instead of being soft and compressible, which it necessarily would be were it produced by matter, it becomes daily
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harder, till it arrives at a certain magnitude, when it gradually becomes softer again, but without any fluctuation of matter being perceived in it.

There is reason to think, that in most instances the testicles swell by the inflammation spreading from the urethra along the vasa deferentia. This has been doubted by some, but without any good reason being assigned for it, nor has any other mode of accounting for it been suggested. We see that by the vasa deferentia a direct communication takes place between the urethra and testes, and the first appearance of a swelled testicle commences in the epididymis, formed as it were by the termination of this very line of communication. In a great proportion of cases too, the patient is sensible of a pain stretching from the swelled testicle along the groin, which we know to be the direct course of the vas deferens.

A variety of other causes might be mentioned, which tend to excite inflammation in the testes in a similar manner with Gonorrhœa :

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norrhœa : among these are, the irritation produced by a stone in the neck of the bladder ; the irritation excited by the introduction of a catheter or bougie ; and the inflammation which takes place in these parts after the operation of lithotomy. A swelling of one or both of the testes is not an unfrequent occurrence from all of these causes ; particularly from the latter, as well as from the use of bougies when not properly introduced ; and we see no manner in which it can be so readily produced as by the irritation excited about the neck of the bladder being carried along the vasa deferentia.

The consequences of swelling of the testes, which we have most to dread are, a hardened state of the parts, chiefly of the epididymis ; which, even when one, but more certainly when both testes are swelled, is apt to be followed by impotency ; and a morbid irritability, which is sometimes so great as to prevent the patient for a considerable time from using exercise, and from following the ordinary occupa-

tions of life, without hazarding a return of the swelling of the testes. Suppuration in the body of the testes, from the inflammation induced by Gonorrhœa, is hardly an object of regard, for it does not take place in one of five hundred cases.

But the two circumstances I have mentioned of a permanent hardness in the epididymis, and that distressful irritable state of the testis itself, which are apt to succeed to this disease, are objects of the first importance, and require an immediate application of every remedy that can probably tend to prevent them. Scarcely any occurrence can prove more distressful or inconvenient than swellings of the testis; and an enlarged state of the epididymis, when it takes place in both testes, and in any considerable degree, has, in many instances, as I have already observed, the effect of inducing impotency. To a certain degree, a swelling of the epididymis often continues for a great length of time; in some instances, during the life of the patient, without any bad consequence

quence taking place, particularly when one testicle only is diseased. But I have known so many instances of the contrary, and of such distressful effects taking place from it, as makes me with confidence say, that nothing should be omitted that might probably tend to prevent or remove it.

As we find that all the symptoms of this disease, as well as the consequences which ensue from it, are usually severe in proportion to the degree of inflammation which takes place, it should in every instance be our view, to prevent it. This is most effectually done by blood-letting; a moderate use of laxatives; opiates; the application of anodynes and astringents to the parts affected; preserving the body in a proper posture, and suspending the testicle.

Of all these remedies blood-letting is the most effectual and certain, particularly local blood-letting with leeches. In plethoric patients, or where the swelling arrives at any considerable bulk, blood should be taken from the arm in such quantities

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as the strength will permit, while, at the same time, a number of leeches should be applied over the scrotum. But in weakly people, particularly where none of the symptoms are violent, the abstraction of blood with leeches alone will commonly prove sufficient.

The first application of leeches to a swelled testicle excites a good deal of uneasiness. They increase the irritability of the parts, and an increase of the tumour seems to be induced by them; but the discharge has seldom continued for the space of an hour or two till the pain abates; the tension, which before was considerable, becomes much less distressful; the swelling even appears to lessen in bulk, and in the course of the following day the patient can allow the parts which he could not previously bear to be touched, to be handled with freedom.

For the most part one application of leeches, if a proper number has been used, proves sufficient; but when any of the symptoms still continue severe, particularly

larly when the swelling does not diminish, when the pain does not lessen, and the febrile symptoms do not abate, it becomes in some cases necessary to repeat the application once and again. I think it here proper to remark, that we should never hesitate in this situation to take blood with freedom. A constitution must be delicate indeed that will be injured even with several applications of leeches; and I am convinced that in every instance very important advantages may be derived from a proper and timely use of them.

Abstraction of blood by means of leeches is not only useful in shortening the duration of the inflammatory symptoms; but, in consequence of this, it serves to prevent two very distressful consequences which swelling of the testes is very apt to induce; that swelled, indurated state of the epididymis which I have mentioned, and the most frequent variety of hydrocele, formed by serum collected in the tunica vaginalis. I have already had
occasion

occasion to remark, that a permanent swelling of the epididymis is a very frequent effect of an inflamed testicle, and I have met with several well-marked instances of hydrocele proceeding from the same cause. That blood-letting in any way, whether general or local, will at all times prevent the accession of these symptoms I will not pretend to assert; but, from the result of much observation, I am convinced that it answers this purpose with more certainty than any other remedy that has yet been employed.

In many situations leeches cannot be procured: In this case small punctures should be made on different parts of the swelling with the point of a lancet; and if the scrotum be previously immersed in warm water, nearly the same quantity of blood may be obtained from them as from the same number of leeches.

As swelling of the testicle in Gonorrhoea seems in every instance as I have already observed, to proceed from irritation in the urethra, it is an object of the first importance

importance to remove every cause that can tend to irritate either the urethra or contiguous parts. Hence, where costiveness prevails, gentle laxatives prove useful. I have known swellings of the testes in different instances induced by hardened feces in the rectum; and nothing tends more certainly than this to keep up the disease, by whatever cause it may at first have been produced. But although costiveness is to be guarded against, we are, for a similar reason, to shun the opposite extreme. Strong purgatives always excite much irritation in the rectum, and are therefore to be carefully avoided in Gonorrhœa. It must consist with the knowledge of every practitioner that drastic purgatives always do harm. Where the bowels are moderately open, no medicines for this purpose are required; otherwise, castor oil, flowers of sulphur, cream of tartar, or any other gentle laxative, should be employed. Even these should be given in small doses, repeated at proper intervals, rather than to incur the risk of exciting irritation
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in the rectum by giving them in large quantities at once.

With a view to lessen and remove the irritation and pain in the tumour with as much certainty and expedition as possible, opiates should be prescribed immediately on the pain becoming severe. When this can be avoided till one or more easy stools are procured they prove most useful ; but when much irritation prevails no regard should be paid to this. As the sickness and general uneasiness often arising from a swelled testis are evidently the effect of irritation, nothing proves so effectual in removing these symptoms as adequate doses of opiates ; and at the same time that they remove this distress of the system by lessening the pain, they also tend to carry off the swelling of the testis. From an idea that opiates tend to increase the heat and other symptoms of fever, many practitioners are afraid of using them wherever fever takes place ; but much experience of their influence enables me to say that they may be employed both
with

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with safety and advantage in every stage of swelled testis where the degree of pain is considerable.

This is so remarkably the case indeed, that I have known instances of the hernia humoralis, as it is termed, being cured by opiates alone, which did not yield to the usual remedies. In whatever manner Gonorrhœa may act in exciting swelling of the testis, the tumour, when once produced, excites so much irritation, that, till this is lessened, the swelling for the most part continues obstinate. Next to blood-letting, therefore, opiates prove often our most effectual remedy.

While the internal exhibition of opiates thus proves useful, advantage is often derived from applying them to the swelling itself. This may be done, either by the application of soft pledgits, soaked in laudanum, or anodyne balsam; or by poultices made with a strong decoction of poppy heads and crumb of bread.

All the saturnine applications prove useful here. When Goulard's extract, as it
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is termed, is employed, or what is nearly the same, acetum lythargyrites, it ought to be in greater quantities than are used in other parts of the body ; for the testes being protected by different coverings, remedies of this kind, and of the ordinary strength, do not readily affect them. When saccharum saturni is employed, as it does not in large quantities dissolve in water if vinegar be not added, and as vinegar proves an useful application even by itself, the two remedies should for this reason be combined.

The steams of warm vinegar also act as an useful discutient. They are with most convenience applied, by suspending the testes over a vessel in which boiling vinegar is contained ; or the swelling may be fomented from time to time with flannel immersed in warm vinegar, and so strongly wrung, that nothing but steam remains upon it. Vinegar, in every form, acts with much advantage in this disease, and this gives a pleasant variety in the way of applying it.

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Whatever remedy is employed the body should be kept as much as possible in a horizontal posture, at the same time that the scrotum should be properly suspended. We find by experience that no remedy will act with certainty while the patient continues to walk about; while a horizontal posture of itself will often have a considerable effect. In suspending the scrotum, care should be taken to do it in such a manner that the testicle is completely supported, without being compressed. Pressure, even in a slight degree, always does harm, and ought to be avoided.

We have already had occasion to observe, that in Gonorrhœa a stoppage of the discharge often takes place on the first approach of a swelled testis. This leads to the idea of some advantage being to be derived from our exciting a recurrence of the discharge; and there is not a doubt of its proving in some instances useful. The discharge from the urethra not only lessens the inflammation in the part from whence it proceeds, but it has

also an influence on the tumour of the testis. As it is now universally admitted that a return of the running does not act by drawing matter directly from the testis, some have suspected that it can never prove useful. But why may not a discharge excited in the urethra act in a similar manner in removing an inflammation of the testis, that we know from daily experience happens with setons and other issues in the treatment of local inflammation of other parts? The fact indeed, is, that a plentiful return of the discharge very commonly relieves all the symptoms of this disease.

For the purpose of exciting a return of the running, bougies prove most effectual; but in affections of the testes they require to be managed with a delicacy not usually observed in this branch of practice: for if more pain or irritation is produced than is necessary for the purpose, instead of acting as a remedy, they necessarily aggravate every symptom. In common practice, I think it better to trust to the frequent

quent application of warm emollients; such as the immersion of the penis in warm milk, or in decoctions of althea or lint-seed; applying warm poultices over the penis, and injecting warm oil or milk into the urethra.

From the instantaneous manner in which swelling of the testes sometimes succeed to a stoppage of the discharge in Gonorrhœa, and from their appearing, we are told, in some instances, even to precede this stoppage of the running, some have doubted whether they are to be considered as the cause or effect*. That the testes may first inflame, and the running afterward stop, cannot be doubted. But although this may happen in a few instances, the very reverse is what we commonly meet with, insomuch that patients who have once been affected with swellings of the testes, are very apt to experience a return of the disease in every Gonorrhœa to which they are in future liable, solely from the running being carried off in the usual way.

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* Vide John Hunter on the Venereal Disease.

way. I am acquainted with some, who, for this reason dare not use even the mildest astringent injection; otherwise they are sure to have swelling of the testis induced; while, in others, it swells at the termination of the running, whether injections have been used or not. In the course of my observation, therefore, no cause of doubt upon this subject has ever occurred.

By a proper application of the remedies that have been mentioned, swellings of the testes are for the most part soon relieved, and at last are carried off entirely, excepting that permanent hardness to which the epididymis, as we have seen, is more especially liable. But although this is the common event of the disease, yet instances are not wanting, most frequently indeed from the patient's misconduct, of the whole body of the testis remaining swelled, and resisting obstinately all those remedies that usually answer. If in this situation, some application be not employed by which the size of the tumour

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mour is soon diminished, and if it be allowed to remain stationary for any length of time, it is very apt to continue enlarged, and sometimes of a schirrous hardness during the life of the patient. I may also remark, that it is this state of the disease which is most apt to terminate in hydrocele, an effusion of serum into the tunica vaginalis testis; a symptom with which in some instances it is accompanied.

In this situation mercury is commonly employed; and, in some instances, when given slowly, as an alterative, I have seen it prove useful; but it is doubtful whether a full course of mercury should ever be advised or not, for when it does not carry off the swelling, which seldom happens, it is apt to increase it, and to induce pain and irritation in the tumour when none existed in it before. Whenever mercury, therefore, is advised, it should be in such quantities as cannot tend to quicken the circulation or excite fever. A decoction of mezereon has in some instances

been given with advantage along with mercury *.

It is in this state of a swelled testis, where the tumour does not yield, but remains nearly of the same size after the inflammation by which it was induced is gone, that emetics are most likely to prove useful. They have been used, I know, in all periods of the disease; but it is chiefly in the situation that we are now considering that I have seen them act with advantage. A smart emetic, carried a proper length, will sometimes, in the space of an hour or two, lessen the bulk of a tumour which for several weeks had obstinately resisted every other remedy. In some cases one emetic proves sufficient, while, in others, the remedy must be repeated once and again. Mercurials were formerly used for this purpose. This was done from the disease being considered as a symptom of Lues Venerea, and for which mercury was known to be the only antidote. But we now know that tumours of the

* Vide Appendix, No. 45.

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the testes, which take place merely from Gonorrhœa, never partake of the Venereal Virus; and accordingly emetics, of whatever nature they may be, prove equally useful here with mercurials, provided the shock which they give to the system is equally considerable.

Electricity has by some been recommended in swellings of the testes; but from any trials that as yet I have made with it, I cannot venture to advise it as a general remedy in this disease so strongly as others have done: If farther experience however of its effects shall place it in a more favourable point of view, I shall not fail in some other edition to acknowledge it. Electricity has certainly in some instances acted as a discutient in the removal of tumours in other parts of the body, and from some experiments I conceive that it proves chiefly useful by tending to promote absorption; but in all of these cases it was frequently applied, and in a more powerful manner than can commonly be done to the testes, which are so tender and

irritable that few can bear it applied to them in any considerable degree, or for such a length of time as might ensure success.

I have sometimes, in this state of a swelled testicle, applied a blister over the whole scrotum with advantage. It would not be safe to apply blisters while the scrotum continues much inflamed; but when the external inflammation and tension subside, they may be advised with safety; and in different instances, I have known them prove successful where other remedies had for some time been employed without any effect.

A due perseverance in the use of some or all of these remedies will seldom fail, where the tumour of the testis is altogether inflammatory; but where it proceeds in a great measure from irritability, as we judge to be the case where it comes and disappears suddenly, or where it comes and goes from one testicle to another, other remedies in this situation, prove more effectual.

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Even in this variety of the disease blisters sometimes prove useful; and I have known the irritation removed, and the swelling carried off in the course of a short time by opiates; but these afford only a temporary relief, and do not prevent the disease from returning on the slightest application of any of the exciting causes which usually tend to induce it.

The remedies which here prove most effectual are cold bathing, and a plentiful use of bark. Sea-bathing, when the season permits, should in the first place be advised, but when this cannot be obtained, cold water may be used at home, with a proportion of common salt dissolved in it. It answers a good purpose whether the whole body be immersed in it, or merely the scrotum bathed in it; but, for the most part, I have thought that it proves most effectual when applied to the scrotum only. As bark and cold bathing act upon the same principle, that is, by giving tone and vigour to parts which we suppose

pose to have been deprived of them, they may either be used together, or separately, as the patient may incline. All who have been liable to frequent attacks of swelling in the testes, from whatever cause it may proceed, should be advised for a great length of time, not less than several years, to wear a suspensory bandage.

The testes, we find, are apt to decay. One of them will begin to lessen in bulk, and, in a gradual manner, will either disappear entirely, or leave only a thin membranous substance in its place. For the most part the other remains sound; but I have known instances of both becoming affected at the same time, and others in which the one remained entire as long as any part of that which was first affected was perceptible, but where it also began to decay as soon as the other was entirely destroyed.

This disease occurs at all periods of life, but most frequently after the 40th year. In many instances, no cause whatever

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ever can be assigned for it; but I have observed that it is most frequent in people of delicate constitutions, where the muscles are soft and relaxed, and the complexion wan and fallow. I have also found that those in whom it occurs, have, in almost every instance, been in early life particularly addicted to Onanism.

In a few cases it has appeared as an evident consequence of a swelled testicle. On the fullness produced by the disease being removed, the process of absorption by which this was accomplished does not stop, but goes on till the whole testis is carried away. In some instances this takes place while the testicle continues to the last of its natural degree of firmness, or even while the hardness still prevails which occurred during the state of inflammation by which the swelling was at first induced: but, in others, before this wasting process commences, the testicle becomes soft and pulpy, or even dissolves into a fluid. It is seldom attended with pain, the patient being, in many instances,
ignorant

ignorant of his loss, till one, or perhaps both testes, are nearly consumed.

Hitherto no certain remedy has been discovered for putting a stop to this complaint. Mercury, hemlock, and electricity have been tried, but with no advantage. The cold bath has for a time seemed to prove useful, but the disease returned again, and both testes were dissolved. In one case, where one of the testes was consumed before the patient perceived it, and where the other was evidently affected, I applied a blister over it. This wasting process stopped, and never recurred again. The patient is about 36 years of age. His inclination and powers of propagation, he says, are still as strong as they were before, and he has lately had a child.

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SECTION VII.

Of Swellings of the Spermatic Cord.

THE Spermatic Cord is liable to swellings of different kinds, but it is such only as proceed from Gonorrhœa that we are here to notice.

It sometimes happens that inflammation of the testicle spreads to the cord, and excites pain and tumefaction along the whole course of it. At other times the cord inflames without any previous affection of the testis. It becomes tense, hard, and painful. The swelling, for the most part, is at first confined to the vas deferens, but at last the other parts of the cord suffer also.

I have met with some in which one or two tumified parts were perceived in the course of the cord, while the rest of it remained

mained sound ; but, in general, the cord is equally affected, from the testis along its whole course up the groin.

As the disease is always, on its first approach, accompanied with pain and tension, and with some inability to walk, the patient is induced to treat it with attention ; but, where the swelling is not soon carried off, the pain will sometimes abate, or even vanish altogether ; and in this state, where the tumour is not considerable, the patient is led to suppose that no harm can arise from it : by this neglect the swelling often becomes so firm and hard that no remedies that we employ have any effect. In some cases I have met with a hard ring, affecting the cord only at a particular spot, where the diseased part was nearly as firm as bone, while the rest of it was in a soft natural state.

While the tumour is confined to one part of the cord I have seldom known it increase to any alarming degree, but whether it be circumscribed, or extended over
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the whole length of the cord, no time should be lost in the application of remedies for its removal. Independent of other reasons, if the vas deferens is particularly affected, so as to be compressed in its course, the testis will become as certainly useless as if it were extirpated: this, in some instances where even one side only was affected, has appeared to render the patient impotent, and it will never fail to do so where both sides are diseased.

The remedies that prove most effectual here are blood-letting, blisters, and such others as are usually employed with advantage in swellings of the testis. These I need not particularly enumerate, as they were fully considered in the last section; but it may be proper to remark, that blood-letting proves chiefly useful on the first approach of the disease, and in this state, when properly applied, that it seldom fails to remove it. It may, in some cases, be necessary to take blood from the arm, but the local discharge of it by leeches applied

plied to the part affected, is at all times to be more depended on.

Where the discharge of blood, however, does not soon lessen the size and hardness of the tumour, we need not expect that afterwards it will prove of any avail. In this case I have repeatedly known blisters prove useful when applied along the course of the cord; but neither are they to be trusted if some effect does not quickly result from them.

In partial circumscribed tumours of the spermatic cord, a small blister applied to the diseased part, and preserving it open as an issue with ointment of cantharides, has tended to reduce it, and in two instances of this, electricity appeared to prove useful.

Mercury is commonly employed here, and where the disease does not soon yield to blood-letting, blisters, and electricity, it is perhaps the only remedy from which we have reason to expect advantage: but I have commonly found, where the swelling has been entirely removed by mercury,

ry, that there has been much cause to imagine that the patient at the same time laboured under Lues Venerea. In some cases the disease has subsisted in an evident form of pox in other parts of the body, while, in others, there was only grounds for suspicion; but, in all, the mercury seemed to operate with more certainty when conjoined with a decoction of mezereon and sarsaparilla.

Mercury appears here to answer with most certainty in the form of frictions, and mercurial plasters, act with more advantage in swellings of this description than in any other in which I have ever known them used.

SECTION VIII.

*Of Swellings of the Lymphatic Vessels of the
Penis.*

WE know from the history of the Lymphatics, that they serve to inhale, and to carry into the general course of the circulation, not merely from the surface of the body, but from every other part of it, fluids applied to their open extremities. In this manner they remove from some parts what might prove hurtful if allowed to remain, and they carry into the constitution from others what is obviously meant for the nourishment and support of it. But while this is their chief purpose, we also know that they carry into the system what often tends to destroy it. They seem to have no power of rejecting what proves hurtful; hence they imbibe

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imbibe poisons, and the most inoffensive articles, with equal readiness. All our contagious diseases are probably produced through the medium of the lymphatics, and we can prove by experiment that this is the case with many of them; particularly with the plague, the small-pox, and Lues Venerea. So readily is the matter of these diseases absorbed by the lymphatics, that it can never with safety be applied to any part of the body; for so quickly does absorption in some instances take place, that we have frequent proofs of infection being carried into the constitution, even after much pains has been taken to wash away the matter by which it was produced, in the space of a minute or two after being applied to the surface of the body.

For the most part we find that the lymphatics themselves do not immediately suffer by the absorption even of the most noxious matter. They will convey the poison of a viper and other serpents into the circulation, by which the animal will be killed in the space of an hour, while no

vestige of its effects will appear in the lymphatic vessels themselves. In like manner, the matter of *Lues Venerea* passes often into the constitution from the penis, without any swelling or other mark of disease being perceived in the lymphatics through which it was conveyed.

This, we must allow, however, is not universally the case. Instances sometimes happen of the matter of *Lues Venerea* passing through lymphatics that are hard and swelled, but we know from daily observation that it is not a common occurrence. We find, indeed, that the lymphatic vessels in every part of the body are apt to swell and inflame on causes capable of exciting irritation being applied to them. Thus we often observe the lymphatics of the arm, swell, become hard, and painful, from a prick in one of the fingers with a pin or a thorn, or even from a nail being cut too far into the flesh; and in *Gonorrhœa* it is by no means uncommon to find a hard lymphatic passing along the back of the penis to the groin; arising, in some instances,

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stances, from the prepuce, and in others from the urethra. But although this, as I have observed, occurs also in some cases of Chancre, it certainly is not frequent. I think, too, that I have observed, where the lymphatics proceeding from Chancres have inflamed, particularly where the inflammation has been considerable, that the constitution has not been so apt to suffer as where this did not happen. From all which, I would conclude, that inflammation of the lymphatics, instead of indicating an increased power of absorbing what is applied to them, as many have imagined, tends in a great measure to lessen, and, perhaps, to destroy it. Till the fact however is farther ascertained, which experience and observation alone can do, it would be improper to place any dependence upon this in the treatment of Chancres. In all cases of Chancre, whether the lymphatics inflame or not, it would be imprudent to omit whatever might tend to render the constitution safe; but, finding that inflammation seems not only to lessen the power

of absorption in the lymphatics, but that they inflame from causes in which we know that no infection exists, as often happens from a prick or a cut with a clean instrument, we would from this alone be led to suppose that this affection of these vessels which occurs in Gonorrhœa, proceeds more from irritation than from any other cause. This idea, however, is farther confirmed by the proofs that I have already adduced of Gonorrhœa being a local disease, as well as by our daily observation of the rise and progress of these swellings. They commence with all the usual symptoms of inflammation. A hard string, or cord, is perceived along the back of the penis. It is painful to the touch; and the teguments above sometimes acquire an erysipelatous redness. The whole penis becomes stiff and uneasy, and this renders erections painful.

In a great proportion of cases the inflammation subsides quickly and easily; the stiffness and pain gradually abate; and the hardness of the lymphatic disappears entirely :

entirely : but where the inflammation has either been severe from the first, or not properly treated, it proceeds in some cases to suppuration, forming one or more small abscesses in its course. The sores, however, which ensue from these, heal readily when the constitution is otherwise healthy, forming a very manifest difference between Gonorrhœa and Lues Venerea. Similar affections in the latter, require, for the most part, a course of mercury to remove them. I say only for the most part, from having met with more than one instance of similar sores in Lues Venerea, arising from this cause, healing without the use of mercury ; by which I am induced to think, that even in this disease, the lymphatics may swell and inflame merely from the acrimony of the matter, and that this inflammation may have some tendency, as I have observed above, to prevent the matter of infection from passing into the system.

Where these tumours in Gonorrhœa are confined to the lymphatic vessels, I have

commonly found that cold poultices, prepared with crumb of bread, and acetum lythargyrites, or saccharum saturni, prove more effectual than any other application. They remove the swelling and hardness, and lessen the pain with more certainty than warm emollient poultices. But where the inflammation spreads over the penis, as it sometimes does, it becomes necessary not only to discharge blood from the arm, but to apply leeches to the pained parts. This, with a low diet, and confining the patient to a horizontal posture, very commonly proves successful. But it sometimes happens, either from the neighbouring parts becoming severely inflamed, or from the diseased lymphatic bursting, that effusions occur in the contiguous cellular substance, and small abscesses forming, they at last discharge their contents, and produce such sores as I have already had occasion to mention.

The treatment of these should be the same as that of sores proceeding from any other cause in which the constitution is

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not diseased. When their edges are hard and inflamed, emollient poultices prove useful. For the removal of sloughs and foulness, red precipitate, ointment of verdigris, or even caustic, may be necessary; and for inducing a cicatrix nothing answers better than unguentum e calce zinci, or ceratum e lapide calaminare*.

In different instances of hardened lymphatics in Gonorrhœa, I have found besides the firm cord on the back of the penis, a thin, flat, hard tumour, proceeding from this cord, spread round the whole substance of the penis, for the breadth of a quarter of an inch. In some this flat kind of tumour was contiguous to, and immediately behind the glans. In one case it was near to the pubes. This last passed round the urethra, which it grasped so firmly as to give cause to suspect that at last it might totally obstruct the urine. A course of mercury was tried in all of them, but with no advantage. A small piece of mercurial plaster was then applied over the swelling,

* Vide Appendix, No. xlvii, xlviii.

swelling, and this, with a gentle purgative of sea-water every second or third morning, was all that was advised. The swelling in each of them became less, but never disappeared entirely. It has not, however, in any of them given any farther disturbance.

SECTION IX.

Of Swellings of the Glands in the Groin.

THE swelling and inflammation of the lymphatics, described in the last section, frequently proceeds no farther than the root of the penis. At other times it goes the length of the groin, and affects one or more of the contiguous glands; which become hard, swelled, and inflamed, putting on many of the appearances of a venereal bubo.

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At other times these glands swell and inflame, where no disease of the contiguous lymphatics is perceived. But although in such cases no apparent inflammation in these vessels takes place, there is, however, much cause to imagine, that in a certain degree it always exists. There is not, at least, any other obvious route by which the inflammation can be conveyed from the urethra to the glands in the groin.

In some cases these swellings become large, and notwithstanding our endeavours, to prevent it, suppuration at last takes place: but, for the most part, if not neglected at first, they may be easily removed by discussion. In most instances this may be done with saturnine poultices alone; but where the pain and inflammation are severe, blood-letting, both general and local, becomes necessary. Laxatives always prove useful, and a cooling, low regimen can seldom be dispensed with.

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The most perplexing part of the surgeon's practice here is, to determine the real nature of the tumour; to ascertain whether it proceeds merely from inflammation, or from the absorption of venereal matter. If from the last, mercury alone will prove effectual; while no practitioner would advise it for the removal of a swelling purely inflammatory. Neither would it, in this case, answer any good purpose. It would not lessen the size of the swelling: nay, by the fever which it sometimes excites, it might even tend to increase it, from which would result disappointment to the practitioner, as well as much distress to the patient.

The circumstances upon which a judgment is chiefly to be formed are these: If no chancre or excoriation has been perceived, either upon the glans or prepuce, and if the inflammation in Gonorrhœa has been considerable, there will be cause to imagine that the tumour is not venereal. When treating of Chancre and Venereal Bubo, this will fall to be considered more

more fully, but at present I may observe, that buboes do not commonly occur without being preceded by chancres. I know indeed, from various cases which have fallen under my care, that, contrary to the general opinion, real venereal buboes sometimes form without any previous chancre, or any external mark of disease; but as this does not happen once in a hundred instances, we are sufficiently warranted in considering the absence of chancre as a reason for supposing that swellings of this description are not venereal.

In glandular tumours arising from Gonorrhœa much pain and tension prevail, not merely in the diseased glands, but over all the groin; and a general sympathetic uneasiness spreads over the thighs and under part of the abdomen. Even the testes and abdominal viscera sometimes suffer; whereas, in the venereal bubo, we commonly find one gland only affected, and the contiguous parts seldom become uneasy till the disease is far advanced; not, indeed, till the tumour has acquired such

a size as to excite pain solely by distention. The swelled gland, it is true, is painful from the first, and the pain becomes gradually more severe as the tumour increases; but the pain is chiefly confined to one part, and seldom spreads farther till the teguments are much stretched by the subsequent formation of matter. And, lastly, when glands swelled from this cause burst, the sores which ensue have a very different appearance from those produced by real venereal buboes. Their edges, instead of being hard and retorted, have more the appearance of sores arising from common abscesses, and they soon begin to heal, even when mercury is not employed, which the others, we may observe, seldom do.

This circumstance that I have mentioned, of the cure of these sores being to be effected whether mercury is used or not, is the most decisive characteristic of their true nature, and when any doubts of this are entertained, either from the swelling having taken place without a previous chancre,

chancre, or from any other cause, we ought to delay the exhibition of mercury till their tendency to heal, or to degenerate into a worse state, be ascertained.

If a sore puts on a healing appearance, and gradually becomes less, there is much cause to hope that a complete cure will be obtained whether mercury is used or not; while, on the contrary, this remedy should be immediately advised when the sores become foul, and their edges hard; and particularly when, instead of healing, they extend to a greater size.

The progress of the swelling also affords a mark of discrimination. The venereal bubo proceeds more slowly to suppuration than the inflammatory swelling of which we now speak; which most frequently indeed, is easily discolled, and seldom arrives therefore at the state of abscess; but when tumours of this description do end in suppuration, it commonly happens in the space of a few days. I have known matter completely formed in them in three or four days from their first appearance;

a circumstance perhaps never met with in the real venereal bubo.

SECTION X.

Of Excoriations of the Glans and Prepuce.

BY the acrimony of the matter in Gonorrhœa the Glans and Prepuce are sometimes excoriated. A slight degree of inflammation takes place at first, either partially or over the whole parts; and this being succeeded by a discharge of matter, the skin at last becomes fretted, and on being examined with a glass, the matter is perceived to flow from an infinite number of small points, on pressure being applied to them.

But, for the most part, this affection of the prepuce and glans takes place without any discharge from the urethra. In the course of a few days after connection with
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an infected woman, and without any symptom of Gonorrhœa, a sensation of heat is perceived over the whole or a considerable part of the prepuce and glans, and it soon terminates in a discharge of matter very similar to what comes from the urethra in Gonorrhœa. From this circumstance, the disease has been termed Gonorrhœa Spuria. The matter indeed is so similar to that of Gonorrhœa, that it is usually some time before the patient can be convinced of its not coming from the urethra. It not only resembles the matter of Gonorrhœa in colour and consistence, but likewise in quantity. In some cases, it is surprisngly great, owing to the great extent of inflamed surface in the numerous plies and doublings of the skin forming the preputium.

When the excoriation is not extensive, the prepuce continues to move upon the glans as it does in health; but when the matter is either of itself particularly acrid, or allowed by want of attention to remain till it becomes so, the skin forming the

prepuce becomes so much inflamed and swelled, that it cannot but with much difficulty be made to pass backward and forward. In some cases this becomes impossible. If this happens when the prepuce covers the glans and cannot be drawn back, a disease is thereby produced, which we term Phymosis; and when the swelling takes place when the prepuce is retracted and cannot be pulled forward over the glans, the disease is termed Paraphymosis. Of both these I shall speak more particularly in the following sections.

By many, this discharge of matter from the prepuce and glans has been judged to be venereal; that is, they have supposed it to be produced by the matter of Lues Venerea. They have therefore conceived it to be always connected with an affection of the constitution, and have accordingly, in the method of cure, been chiefly directed by this opinion.

In this, however, they are certainly wrong. From much observation, I am convinced, that the discharge in all such cases

cases is of a local nature, and that it is no more capable of affecting the constitution than the matter of Gonorrhœa. I believe indeed that this is now very generally admitted ; and that it is those only who doubt of it, who, taking their information from books, have not paid that attention to the event of these diseases, which in forming a judgment of them ought always to be done. It will universally I believe be found that the discharge may be more easily removed by remedies applied directly to the parts affected, than by mercury or any other medicine given internally. Indeed, no advantage so far as I have ever perceived, is derived from the internal exhibition of medicines, while the disease seldom resists the application of an astringent wash : neither have I ever known the constitution affected with pox from excoriations produced by Gonorrhœa.

It is true that buboes and symptoms of pox sometimes occur where the prepuce and glans have been previously affected in

this manner. Of this I have seen many instances: but in all these it has happened, that, on inquiry, the patients were found to have had connection with diseased women during the continuance of the excoriation; and whatever may be the opinion of some individuals upon this, few I believe will doubt of an ulcerated or excoriated surface being particularly favourable for promoting the absorption of whatever matter is applied to it; inasmuch, that it is the universal remark of patients, that they never escape being poxed, if in such circumstances they have connection with infected women.

It is worthy of remark, that a small partial excoriation is always at first of a suspicious nature, while, from any observation that I have been able to make, a more general affection, in which the excoriation extends over the whole prepuce and glans, terminates easily and without producing any constitutional taint. The disease sometimes at first, indeed, occupies a small spot, and afterwards extends
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over the contiguous parts, where, by the event, we judge of its being of an innocent nature from no disease of the constitution being observed to ensue: But I have uniformly found, where a small part only has remained for some time raw and excoriated, without extending to the surrounding parts, that symptoms of pox succeed to it with as much certainty as they ever do to chancres. I therefore believe that all partial excoriations of this description which remain for a few days in a circumscribed state, are produced by the matter of Lues Venerea, and that they ought accordingly to be treated as symptoms of that disease. Besides the other differences which I have elsewhere enumerated between the matter of Lues Venerea and Gonorrhœa Virulenta, it would appear that in this they differ in the most obvious manner. The matter of Lues Venerea, however diffusible it may be when received into the system, from which indeed it is never expelled but with the assistance of mercury, is always slow in its progress

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while only locally applied either to the penis or any other part. Neither can it be applied, as I have already had occasion to remark, to the smallest point, without much risk of pox being produced by it: whereas, the matter of Gonorrhœa, whether it be applied to the urethra, to the glans, or prepuce, spreads quickly over all the contiguous parts; while it is obvious to daily observation, either that it is not absorbed, or if it be taken into the system, that no constitutional disease ensues from it.

These excoriations of the glans and prepuce, not only resemble Gonorrhœa, in being produced by the same matter, and in being entirely local, but in the method of cure. We have already had occasion to see that the discharge in Gonorrhœa can never be speedily removed, but by the use of injections. In like manner, bathing the excoriated parts in astringent solutions, proves the most effectual practice here. Lime-water answers particularly well for this purpose: also weak solutions of sugar of lead, and white vitriol: immersing the
parts

parts in brandy, or in a strong infusion of red-rose leaves, will sometimes remove the discharge on the first application. It is proper, however, to remark, that the more frequently these remedies are applied, the more effectual they prove. They should be used at least five or six times daily, and for the space of a few minutes at each application.

Emollient ointments are frequently employed, but the very cause of astringents proving useful, renders them improper. They constantly increase the discharge, while no advantage ever accrues from them.

Neither do we find that purgatives, or any of the cooling medicines usually prescribed here are of any real utility. When much inflammation takes place, they may, in some instances, prove useful, but in all such cases blood-letting is more to be trusted; particularly the application of leeches to the diseased parts, which, in every case of local inflammation, is to be considered as the most effectual remedy.

It has been objected to the application of leeches in excoriations of the penis, that the wounds from the bites of these animals are apt to degenerate into chancres. This proceeded upon the idea of these excoriations being produced by the matter of *Lues Venerea*; but now, when the contrary is known, it is obvious that the opinion must be ill founded; and from various and repeated trials of the remedy in question, I can decidedly say that it is so.

But admitting that a case should occur, in which it might be doubtful whether the excoriation and swelling was truly venereal or not, still I would not hesitate in advising the application of leeches: they would prove more effectual than any other remedy in carrying off the inflammation, while their bites, if they should put on the appearance of venereal sores, would immediately render the nature of the disease certain, which otherwise might for some time have remained in doubt.

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In all fores and inflammatory affections of these parts, the posture of the body and position of the penis, are circumstances not to be overlooked. The patient should be kept as much as possible in a horizontal posture; and the penis should be elevated so as to prevent the glans from hanging downwards. It often, happens, indeed, where this is omitted, that swellings remain obstinate for many weeks together, which otherwise might have been removed in a few days.

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SECTION XI.

Of Excoriations in the Parts of Generation of Women.

THE parts of Generation in Women are liable to excoriations of a similar nature with those enumerated in the last section. In some cases they are confined to the clitoris, nymphæ, and labia pudendi. In others they spread to the perineum, and even to the groins and thighs, where, from negligence and want of attention to cleanliness, I have known deep and very extensive ulcers produced.

Where the excoriations are confined within the parts of generation, the symptoms are nearly the same with those of Gonorrhœa in the usual form of the disease; but where the inflammation and rawness spread to the thighs, much distress
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is experienced in walking, and in every motion of the body.

The method of cure is nearly the same in women as in men. Bathing the parts frequently with one or other of the astringent solutions mentioned in the last section, for the most part, proves effectual; for the excoriated parts seldom lie so deep as to require the use of the syringe; but when the parts become evidently ulcerated, bathing alone is not sufficient. In this case the ulcers fall to be treated in the same manner with sores produced by any other cause. When foul and sloughy, an ointment strongly impregnated with *mercurius precipitatus ruber* is perhaps the best application we can use; and for the purpose of healing them, nothing answers better than common cerate, with a large proportion of *lapis calaminaris*, or unguentum e calce zincæ, for which prescriptions are given in the Appendix.

When sores of this description do not soon yield to these applications, especially when they spread and penetrate to a
greater

greater depth while the patient is using them, there will be some cause to suspect that the constitution is tainted with Lues Venerea; in which case a course of mercury should be advised, being the only remedy upon which, in such circumstances, we can place dependence.

SECTION XII.

Of Phymosis and Paraphymosis.

IN section tenth I judged it necessary to give a definition of these two diseases. Inflammation of the preputium always excites some degree of thickness and contraction. When this contraction occurs while the prepuce covers the glans, and in such a degree as to prevent it from being pulled back, the disease that takes place is termed Phymosis. We say, that Paraphymosis is produced when the prepuce

puce contracts behind the glans, and cannot again be drawn over it.

One of the most frequent causes of phymosis is chancres on the preputium. The thickening of the skin induced by chancres, and the inflammation which they are apt to excite, is often productive of phymosis; but it also occurs from other causes. Whatever excites much inflammation of the penis will induce phymosis. Hence it readily occurs in all cases of Gonorrhœa attended with any unusual degree of inflammation, particularly in that variety of the disease where the glans and prepuce are inflamed and excoriated. But although these excoriations often terminate in phymosis, they are still more frequently productive of paraphymosis. The patient, in clearing away the matter, necessarily draws back the preputium, and when the parts are previously much inflamed and thickened, they are apt to contract so suddenly when in this state of retraction, that they cannot again be drawn over the glans.

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In the treatment of phymosis, we prove sometimes successful by a proper use of emollients. No effect will result from them when the stricture has been of long duration; but, unless the inflammation is severe, they will often answer if duly persisted in from the first. Immersing the penis, from time to time, in warm milk, or in a decoction of althea root, or of lintseed, is perhaps the most effectual method of applying emollients; and when much matter is produced between the prepuce and glans, either by chancres or inflammation, these liquids should be injected from time to time with a syringe. But with a view to lessen the discharge, after thus washing out any matter that may be formed, a weak saturnine solution should be injected three or four times a-day. This, with a low diet, abstinence from exercise, and suspending the penis, will, for the most part, prove successful; but when the parts are much inflamed, it becomes necessary to take blood in quantities proportioned to the symptoms, not
merely

merely from the arm, but from the penis itself, by the application of leeches, which may always be done with safety where the disease is local, as I have shown to be the case where it proceeds either from simple excoriation or Gonorrhœa: but when produced from chancres, it is better to omit them.

While much stricture remains, it is always improper to force the preputium back. This, however, is often done, but it very commonly terminates in paraphymosis; for when the parts are much contracted it is almost impossible to get the prepuce again brought over the glans, if it has once been forced completely behind it. It is better, therefore, to wait till the stricture is entirely removed, before any attempt for this purpose is made. Besides the risk of inducing paraphymosis, the irritation which it gives tends always to make the stricture more obstinate. When the inflammation is entirely gone, it may be proper, after immersing the penis in any of the emollients that I have mentioned,

tioned, and rubbing it gently over with warm oil, to endeavour, from time to time, to stretch it to its usual extent ; but even at this period of the disease the prepuce should never be pushed back with such force as to excite much uneasiness.

In the treatment of phymosis it is proper to remark, that, in a great proportion of cases, the stricture is never entirely removed. In slight degrees of it, we commonly succeed by the means that I have mentioned, but whenever it is severe the parts remain under some degree of contraction, for the most part, during the life of the patient. We have it indeed in our power to remove even the most inveterate stricture that occurs, by laying the prepuce open, either by a partial incision, or cutting it from one end to the other, according to the extent of the disease ; but this is too severe a remedy for the removal of phymosis in the ordinary form of the disease : where the preputium is so much contracted as to interrupt the passage of urine, or to impede coition, it no doubt

doubt becomes proper to lessen or remove the stricture, but it is most frequently for obtaining ready access to concealed chancres that we advise the prepuce to be freely laid open.

Even chancres are often cured while the prepuce remains contracted; but this is only the slighter kinds of them. When chancres are either deep or extensive, although with much care and attention they may in some instances be cured, yet we are much more certain of effecting our purpose, and of doing it speedily, by laying the sores completely open. I am clearly of opinion, however, that a patient should rather submit to an ordinary or slight degree of phymosis, where there is no disease concealed by it, than incur the pain and distress of an operation. Many have it from their birth, and are not sensibly hurt by it.

It happens, indeed, in some instances, even of this natural phymosis, if we may so term it, that we are under the necessity of removing the stricture by an incision.

This is particularly the case where the natural exudation of these parts is in such quantities as to excite irritation, which it always does when it adheres to the prepuce and glans. By much pains in washing with a syringe, the parts may be kept so clean as to prevent them from suffering with this mucus; but in general we find it necessary either to lay the contracted preputium open from one end to the other, or to remove a portion of it entirely, by the operation of circumcision.

It may be proper to observe, that although this operation of removing a portion of the prepuce is in itself exceedingly simple and easy, and never fails to answer the purpose where the parts are perfectly sound, that it is very apt to disappoint us entirely, when they are much inflamed, and under the influence of irritation. In this situation, although the parts in which the stricture is seated be completely removed, the remainder of the preputium contracts almost immediately after the operation, so as to create nearly the

the same degree of inconveniency which it did before. By the introduction of doils of lint, sponge tent, and other such articles, we may for a time prevent the contraction from becoming considerable, but the irritation which these applications excite oblige us at last to lay them aside, when the stricture often takes place in a degree equal to what it was before the operation.

I have taken the more particular notice of this, from different cases having fallen under my care, in which, by endeavouring to remove a contraction of the prepuce by the operation of circumcision, we were completely disappointed. In three of these the operation was done by others. In one I performed it myself. But although every thing was done in all of them that might probably render them successful, yet they all failed, and after a considerable time spent in trying to dilate the newly-formed stricture, I was, in two of these instances, obliged to perform the operation for the phymosis in the usual

way, by making a longitudinal cut through all the remaining part of the preputium. In one the stricture was not so considerable as to render it necessary, and in the other the patient would not submit to it.

Were we to remove the prepuce entirely, by dissecting it completely away from that part of the penis where it begins to be formed by an elongation or production of the skin, the operation might probably answer our expectation, but it would leave the glans altogether uncovered, which, in those who have been accustomed to have it protected with the prepuce, is apt to excite very disagreeable sensations. Neither can I determine with certainty whether it would, in every case, answer the purpose of giving complete relief or not. Where the parts are previously in a state of irritation, the remaining skin might contract behind the glans, so as to produce some degree of stricture: at least, in one of the four cases to which I allude, a very considerable portion of the prepuce was removed, and yet the remainder contracted
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in such a manner as to form a stricture which gave much distress.

Different methods have been proposed for performing the operation of a phymosis. For these the writers on chirurgical operations must be consulted, but the easiest, and perhaps the simplest of any, is that which I have described in the System of Surgery *, in which the incision is made by passing a sharp pointed bistoury along a directory between the prepuce and glans, and having pushed the point of the bistoury through the prepuce near to where it begins to form, the cut is completed by drawing the instrument forward; in which manner it is done, not only more neatly, but with more expedition, and with much more ease to the patient than in the usual way of cutting the prepuce from before backwards. In this manner the incision is made at different strokes, by which the cut is apt to be ragged and unequal, whereas in the other it is done at once;

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and

* Chapter xxviii. Section 1.

and in any direction that the operator may incline.

Some advise the incision to run on the side of the penis, and others along the back of it. The difference in general is not material, but the former appears to me to be preferable, from the matter either of the cut itself, or of concealed chancres not being so apt to lodge between the prepuce and glans, as when the incision is made on the back of the penis. It is proper, however, to observe, that there are two circumstances, which in this operation require attention: the large veins of the penis should be avoided, and when chancres prevail, the cut should run as near to them as with propriety it can be made, so as to admit of the easy application of proper dressings.

In the conduct of the cure after the operation, we should endeavour to prevent the edges of the divided prepuce from adhering to the glans. I have known much inconvenience produced by this being overlooked, and it is easily prevented by

a small pledgit of lint being inserted between the prepuce and glans at each dressing.

Paraphymosis may happen either from a stricture of the prepuce, from a swelled state of the glans penis, or from a combination of both.

When it appears to depend, either altogether or chiefly, on a contracted state of the preputium, the same applications should be made to it which have been advised above for phymosis. By the use of warm emollients, the stricture, when in a slight degree, may be so far removed as to admit of the prepuce being drawn over it. After immersing the penis for a few minutes in warm milk, and rubbing the contracted parts with any emollient ointment, we may sometimes succeed by applying the fore and middle finger of each hand behind the contracted part of the prepuce, and pulling it gently forward, while, with the thumb of each hand placed upon the glans, we push it firmly backward. This I have done in different

instances, which otherwise would soon have ended in strictures of the most confirmed kind. It must, however, be confessed, that it is only in the commencement of the disease that this, or any other manœuvre of a similar kind, will succeed; and there is no room for any such attempt when the disease proceeds from a tumefied state of the glans.

When the disease seems either to arise from an enlarged state of the glans, or partly from this and partly from stricture of the prepuce, as sometimes happens, we may endeavour to relax the preputium by rubbing it with oil, or an emollient ointment; but in such circumstances it is evident that the application of emollients to the glans would rather do harm. By relaxing the parts affected they would increase the swelling. Cold astringent applications prove more useful, and ought alone to be advised. In this view, cloths dipped in brandy, vinegar, and cold water, should be applied to the parts; also poultices, with crumb of bread, and a solution

lution of saccharum saturni in vinegar and water. But when these do not soon succeed in reducing the swelling, we are reduced to the necessity of removing the stricture by an operation, in order to prevent the accession of more serious symptoms. When too long neglected the glans is apt to mortify, by the contraction of the prepuce putting a stop to the circulation of the blood.

This operation consists in making one or more incisions into the contracted edge of the preputium. We sometimes succeed by making two or three small cuts in different parts of the stricture with the shoulder of a lancet. They should be carried entirely through the skin into the cellular substance, for when they bleed freely, they commonly give much relief; but it must be admitted that these small incisions, however numerous they may be, do not prove so certainly effectual as a single free cut carried completely through the stricture. The easiest method of doing this is, by insinuating the end of a director

rector beneath the stricture, and cutting upon it with a scalpel. For this purpose a short director should be used, with the groove open at the extremity.

The incision does not require any particular attention, but the divided vessels should be allowed to bleed freely. This generally lessens the pain, while it co-operates along with the removal of the stricture to carry off the swelling. Lint, spread with unguentum saturnium, makes the best dressing for the fore.

It must be remembered that we are now supposing that no disease exists in the constitution. When either of these diseases are conjoined with Lues Venerea, as we often find to be the case, the patient cannot be rendered safe, nor will the sores produced by the operation heal without the assistance of a course of mercury.

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SECTION XIII.

Of Warts on the Glans and Prepuce, and Labia Pudendi.

THE Glans, Prepuce, and Labia Pudendi, are frequently attacked with warty excrescences on the termination of Gonorrhœa. They sometimes appear during the continuance of the discharge, but more commonly at the end of it, when the patient having considered the cure as complete, is surprized with the appearance of this new symptom.

At first they appear in the form of small points, which gradually become larger, and frequently so numerous as to cover a considerable part of the penis. In men they commonly begin immediately behind the glans, and extend, in the form of a ring, round the whole penis, near to the junction

junction of the glans and prepuce. They afterwards appear indiscriminately on all the neighbouring parts, but in greatest number upon the prepuce.

In some cases they are at first perceived in the urethra. The patient complains of an obstruction to the flow of urine, and on separating the lips of the urethra, a red, florid excrescence is observed to be the cause of it. I have also met with this kind of production in the urethra of women.

These warts are seldom painful; never, unless they proceed to a state of ulceration, which, when they do, is always to be considered as the fault of the patient. On their first appearance they are always firm and entire, but when they become numerous, if they be not regularly cleaned, the moisture natural to these parts becomes acrid, and renders them tender; and this if it be not prevented by timely assistance, soon terminates in painful ulcers.

These excrescences assume various forms. For the most part they are single,
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and pendulous, with narrow necks, but in some instances they have broad bases; while, in others, a number of these smaller warts sprout all from the same root, and form excrescences of unequal cauliflower kind of surfaces. When long neglected, as often happens with poor people, they sometimes acquire such a bulk as to cover the glans entirely; and when in this state they become ulcerated, the whole mass assumes such a diseased appearance, as with those not accustomed to this branch of business, gives a suspicion of their being cancerous. Of this I have met with different instances; where the penis, after being doomed to amputation, has been saved and the warty excrescences removed.

It is difficult, or perhaps impossible, to ascertain the cause of these warts. In some cases they are obviously produced from the cuticle, their attachment being so slight, that on being removed, the cutis vera is left entire: in others they proceed from the skin itself, but I never observed them to go deeper than this.

Whatever

Whatever tends to excite the flow of an unusual quantity of blood to the penis, seems to create a disposition in these parts to the formation of warts: hence they succeed to various kinds of irritation. We know that they are a frequent consequence of the venereal irritation, for they often succeed to chancres; and I have known them in different instances proceed from simple excoriation, where neither Gonorrhœa nor Lues Venerea ever existed. By whatever cause irritation is produced in the prepuce and glans, it seems to excite a disposition in the small blood vessels of the parts to sprout or pullulate, by which these warty productions appear to be formed.

As warts are a frequent consequence of chancres, they have been always considered as of a venereal nature, whether they are the immediate effects of chancre, Gonorrhœa, or any other cause. This opinion, however, is by no means well founded. Warts on these parts may no doubt appear, while Lues Venerea exists in the constitution;

constitution; and in such instances mercury must be given before a permanent cure can be obtained: But in a great proportion of cases, at least in ninety-nine of a hundred, they appear to be entirely local; insomuch that remedies acting only upon the constitution have no influence in removing them, while they, for the most part, are easily carried off by a variety of applications, which act solely upon the excrescences themselves, or rather upon the vessels by which they are produced. Nay, these warts are so evidently of a local nature, that when they occur in Lues Venerea, although they are apt to return when removed while the infection exists in the system, yet it is equally certain that this disease of the habit may be completely eradicated without any effect being produced upon them. The warts which succeed to chancres commonly remain equally firm and obstinate after mercury has been given as they were before, and are to be removed by the same means as if the constitution had never

never been diseased. This, I may observe, is a point which in a particular manner merits attention; I mean of all practitioners not daily versant in this branch of business; for while the opinion is retained, as still is the case with some, of warts on these parts being in most instances connected with Lues Venerea, much mischief is apt to be done by a great deal of mercury being given where no advantage can ever ensue from it. In the treatment of warts, I have known the constitution almost ruined by one course of mercury after another, without any effect upon the excrescences, and which were afterwards easily and speedily removed by remedies applied directly to the parts themselves.

I have mentioned irritation as a cause of these excrescences, but it is only the slighter kinds of it that seem to produce them. They often succeed to a slight degree of inflammation, but I have never known them form on parts highly inflamed: on the contrary, much inflammation seems to destroy the tendency in these

these parts to the production of warts, in-
somuch, that our most effectual remedies
in the cure of warts and for preventing a
return of them, are such as always excite
a good deal of pain and inflammation.
They may no doubt be removed more
quickly with a scalpel or scissars, or by
tying ligatures of waxed silk round them
when they are pendulous, and have nar-
row necks; but they are more apt to
return when removed in this manner,
than when destroyed with caustic, unless
some degree of inflammation has at the
same time been induced upon the parts.
Besides, ligatures cannot be applied to
warts with a broad base, which they fre-
quently have; and few patients will sub-
mit to the use of the scalpel for the extir-
pation of numerous warts, which in such
instances very commonly prevail.

Inflammation, for the purpose of remov-
ing warts, might be excited in various
ways; but we necessarily prefer that which
is easiest to the patient, and which at the
same time proves most effectual. We some-

times succeed by bathing the warts and contiguous parts three or four times a-day with a strong solution of crude sal ammoniac, or of corrosive sublimate. And a solution of mercury in spirit of nitre at the same time that it acts upon the warts themselves as a caustic, seems also, by exciting inflammation in the vessels of the contiguous parts, to remove or destroy the disposition by which they were at first produced. Prescriptions are given for these solutions in the Appendix, Nos. 39, 40, and 41. The two former may be used with freedom, but the strength of the latter makes it necessary to apply it with more delicacy and attention. The parts should be merely moistened with a pencil dipped in it, nor should this be repeated above once in two or three days.

Tincture of cantharides, applied in this manner, sometimes answers; but we find by experience, that our success is more certain from the application of such powders as irritate and inflame the skin, than from the use of the same remedies in a liquid

quid form. Savine in fine powder is one of the best for common use. Common mustard, whether of the white or black kind, likewise answers; and I have known the powder of betony, and of white hellebore, both separately, and mixed in equal quantities, prove successful.

If the warts and skin lying between them be sprinkled over with any of these daily, a sufficient degree of inflammation is, for the most part, soon induced, and we know that it has gone far enough when some of the smallest begin to shrivel and drop off. At this time we should therefore desist from any farther use of the powder, always taking care to renew it from time to time, if the inflammation subsides before the excrescences are entirely removed. In a few instances, the warts sprout up again after they may have appeared to be entirely gone. When this takes place, the powder should again be applied over the whole seat of the disease, and continued till such a degree of inflammation is induced as the patient can easily bear; nor will they

be apt to return again, if the parts at this second application of the remedy have been made to inflame sufficiently.

These powders, even in a simple unmixed state, very seldom fail, but in some the warts are so firm, and the skin of the prepuce so thick and corrugated, that powders of a more powerfully irritating nature are required. In such cases a small proportion of red precipitate, finely levigated, being added to the pulvis fabinæ, commonly answers. Calomel sometimes proves effectual, whether used by itself, or mixed with any of these powders; and a powder composed of equal parts of alumen ustum and mercurius precipitatus ruber, seldom fails.

Even when warts are seated in the entrance of the urethra, they may be treated in this manner, at least I have often removed them in this situation by the application of these powders, and I never knew them do harm. In one instance when the wart was farther up the urethra than usual,

usual, the excrescence was completely removed by the pulvis fabinæ alone, but a considerable degree of pain was induced by it, which ended in a very copious puriform discharge. The urethra became tender and inflamed, through its whole length, and the running having all the appearance of matter of Gonorrhœa, I suspected that a new infection had been communicated. My patient, however, assured me that this could not possibly be the case, as he had not for many months had any connection with women, and there was no cause to doubt his assertion. The running continued for the space of two or three weeks, with all the symptoms of a common clap, and was cured precisely in the same manner, by the use of astringent injections.

SECTION XIV.

Of Gonorrhœa Simplex.

I HAVE endeavoured in different parts of this work to shew that the discharge in *Gonorrhœa Virulenta* is the effect of inflammation excited in the urethra and contiguous parts by the matter of infection being applied to them. In the end of the preceding section a case is mentioned, in which symptoms exactly similar to those of *Gonorrhœa Virulenta* arose from the application of an irritating powder to the urethra; and there is reason to suppose that they may at any time be induced by whatever excites inflammation in any part of that membrane. A puriform discharge from the urethra induced in this manner, and without any connection with

with an infected person, may be denominated *Gonorrhœa Simplex*.

We have already had occasion to see, that a discharge frequently occurs in females, usually termed *fluor albus*, which, in particular circumstances, very much resembles *Gonorrhœa Virulenta* *.

In men, we often meet with a disease exactly similar to this; where a copious discharge of matter takes place from the urethra, attended with a scalding heat in voiding urine, as well as with other symptoms of *Gonorrhœa*, and where there is no suspicion of infection being communicated.

Practitioners should at all times be aware of this, particularly the younger part of the profession, who are apt to suppose that every discharge of matter from the genitals, especially in men, arises from the venereal disease: But although this is undoubtedly true in a great proportion of cases, yet every practitioner of experience must have met with instances of the reverse, and in which the reputation of the

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* Vide chapter ii. section 10.

most virtuous people might have been ruined, had the distinction that we are now considering been overlooked. I have met with different instances of men newly married being seized with this symptom, in some of which, although there was at first much cause for suspicion on the part of the husband, yet on being informed by a person in whom they placed confidence that this kind of running is a frequent effect of other causes, and that the discharge which had newly taken place, would probably shew, by its ending more quickly than *Gonorrhœa Virulenta* usually does, that it was of a different nature, they soon become less anxious, and at last were convinced of their fears being groundless.

In like manner, I have in different instances been consulted by women, who, on finding their husband's linen stained with matter, have fancied that they themselves have been injured by them; and the imagination being once affected, we all know how difficult it is in such matters to
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set it right. Some time ago I was consulted by a lady in this situation, who, from the cause that I have mentioned, had long been reduced to a state of the greatest distress and misery. Her mind was in the first place deeply affected with the supposed misconduct of her husband; and she was fully convinced that she herself laboured under almost every symptom which attends the venereal disease. To this she was in a great measure led, by the opinion of a midwife, who unfortunately informed her, that from much experience in matters of this kind, she was convinced that she was poxed, and desired her to apply to me. Instead of this, she put herself under the care of one at a distance from town, in the place where she resided, and who, from not having much experience in matters of this kind, was easily induced to believe that symptoms took place, which did not exist but in the imagination of his patient. There was no external mark of disease; but she complained of pains in her bones, of severe pains in the parts of generation

generation and loins; uneasiness in the nose, throat, &c. In short, she had perused a modern treatise on the Lues Venerea, by which she had become acquainted with the symptoms of that disease, almost all of which she now imagined that she laboured under.

A complete course of mercury, besides a variety of other medicines, were given in the country, but no advantage being derived from them, the patient came under my care, when at once it appeared that she was diseased in imagination only; for I did not find, on the most minute inquiry, that any symptom of Lues Venerea had existed from the first. She acknowledged, that at different times, both before and after marriage, she had been much distressed with fluor albus; but this was the only disease of which she ever complained; and it never was of long continuance.

I endeavoured to convince her that she was perfectly sound, that she never had the disease, and that the matter which she
had

had seen on her husband's linen, and which was the only foundation of her suspicion, was either produced by his connection with her while she was distressed with fluor albus, or by some other cause of a nature equally innocent. All this, however, would have proved ineffectual, but I luckily had an argument in my power which brought conviction along with it, and which, in the course of a few days, made all her symptoms vanish, which otherwise might have been of the most permanent nature. At the very time when she suspected her husband to have given her the infection, he had consulted me by letters, which I preserved, in which he expressed his astonishment at the sudden appearance of a discharge of matter from the urethra, accompanied with heat and uneasiness along the whole course of the passage from the glans to the bladder. He never had been infected with Gonorrhœa, and having had no connection with any other woman than his wife, of whom he could not entertain the least suspicion, he concludes

concludes his first letter by inquiring whether or not such symptoms ever originate from other causes than intercourse with an infected person, and at the same time wished that such medicines might be sent him as would as quickly as possible put a stop to the discharge. In my answer to this, which I also preserved, I mentioned several causes by which a discharge from the urethra may be excited, and especially the effect of repeated intercourse with women labouring under fluor albus where the discharge is acrid. I at the same time sent him an astringent injection, desiring that it might be used if the discharge did not soon disappear. In a subsequent letter he informed me, that he had been perfectly convinced by my account of it that his disease was of an innocent nature; and as a proof of it he mentioned, that it went entirely off in the course of eight or ten days, without the injection, or any other remedy, being employed. A sight of this correspondence, which I was enabled to shew, could

could alone remove the distress with which my patient had long been tormented.

I have since that period had occasion to know that her husband has at different times had a return of the discharge from the urethra, in some instances from exposure to much cold, fatigue, or wetness, and repeatedly from connection with his wife when she laboured under fluor albus.

This happened with a patient who never before had any discharge from the urethra; but a running is more particularly apt to occur from this cause where Gonorrhœa Virulenta has frequently taken place before. I know many who uniformly experience a return of the discharge on being exposed to much bodily fatigue; particularly much riding on horseback, or jolting in a carriage on a rough road; on their being overheated with wine, or having more connection than usual even with sound women.

The irritation excited in the urethra by a stone in the bladder will, in some instances, induce a very copious discharge
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of matter. When this takes place from the bladder itself, the matter comes off mixed with the urine, and in no other manner; but when it proceeds from the urethra only, as often happens, it assumes all the appearances of *Gonorrhœa Virulenta*, and passes off whether any exertions be made to empty the bladder or not.

We are led to understand, that people who are much employed in working among the warmer kinds of spices are very liable to a scalding in making water accompanied with a discharge of purulent-like matter from the urethra. It is particularly apt to occur in those who work chiefly among Cayenne pepper: Nay, it has been known to happen from a person carrying this article about with him even for the space of a few hours.

The most frequent cause of strictures in the urethra is *Gonorrhœa Virulenta*; but they also occur from other causes. They have been met with in all periods of life, even where patients have never had any previous

previous discharge from the urethra. They are particularly apt to occur in people advanced in years, between the sixtieth and seventieth year of age, and sometimes later. A person who in his youth has suffered much with *Gonorrhœa Virulenta*, is very liable to be attacked about this period with strictures in the urethra, but they likewise happen, as I have observed above, where no cause of this kind can be traced; and in whatever way they are induced, they are very constantly attended with a plentiful discharge of purulent-like matter.

In some, these strictures have been attended with such a concurrence of circumstances, so similar to those which occur in *Gonorrhœa*, that the best practitioners have at first been deceived with them. Where the irritation in the urethra has been considerable, sympathetic swellings have occurred in the glands of the groin; and one or both testicles have swelled from the same cause.

It

It is generally known, that a discharge may at any time be excited from the urethra, by the use of stimulating bougies. This has in different instances been put in practice, where violent pain and other symptoms have been induced by the sudden stoppage of the discharge in Gonorrhœa, but it has also been advised for the same purpose, that is, for exciting a discharge of matter merely for the removal of pain, where neither Gonorrhœa nor any venereal symptom had ever taken place; and it has never failed when the stimulus is of a sufficient strength of being attended with this effect.

We are informed by authors, that gout has in some instances been productive of a discharge of puriform matter from the urethra; and I have not a doubt of its happening in rheumatism. Of this I have met with different well-marked instances, where a flow of matter from the urethra has alternated with pains in the knees, and other large joints; and among labouring
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ing people accustomed to work much in water, such as ditchers, this kind of discharge is by no means unfrequent. A patient of mine, who annually takes a great deal of exercise in following game, is always seized with a discharge of matter from the urethra when he goes in search of ducks, by which his feet and legs are kept immerfed in water for several days together.

Other causes might be mentioned, by which a discharge from the urethra is at times produced, in every respect similar to the matter of *Gonorrhœa Virulenta*, but these are sufficient to show that it may frequently occur from causes of the most innocent nature, and in persons entirely blameless. Of this, all who have done much business in this branch of practice will be easily convinced, as instances of it are often met with; but the distress which the want of discrimination in matters of this kind is apt to excite, is often so great, not to individuals alone, but to

the families with which they are connected; and I have happened to meet with so many distressful occurrences of this kind, which might easily have been prevented, that I judged it proper in this particular manner to speak of it.

The fact being established, that all the usual symptoms of *Gonorrhœa Virulenta* may be excited by a variety of causes, may be considered as an additional proof of the matter of *Lues Venerea*, and of that disease being different; for although the matter produced by these causes is so similar to that of *Gonorrhœa* from impure coition, that the one cannot be distinguished from the other, yet no person ever imagined that the symptoms of *Lues Venerea* could be produced by any of these, nor by any cause whatever but the absorption of the matter of that disease.

It may also be remarked, that this opinion of the difference between these two diseases is farther confirmed by the method

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of cure being in Gonorrhœa the same, whatever may have been the cause of the discharge. Whether the matter discharged from the urethra be excited by infection communicated by a person labouring under Gonorrhœa Virulenta, or by any of the causes of Gonorrhœa Simplex that I have enumerated, the method of cure should not be varied. It is true, that the latter will for the most part disappear, whether any remedy be employed for it or not; but this will also happen with Gonorrhœa Virulenta. A cure, however, will be obtained much more speedily by a timely and proper use of injections than in any other manner; and if this is admitted in one variety of the disease, it will be found equally applicable in the other. So far, indeed, as my observation goes, the discharge in Gonorrhœa Simplex is not more readily affected by the internal exhibition of medicines than we have shewn it to be in Gonorrhœa Virulenta; while a proper application of an astringent in-

jection very seldom fails to remove it. When, however, it seems either to depend upon general debility, or to be much connected with a relaxed state of the system, we find from experience that cold bathing, and whatever tends to restore the loss of tone that has taken place, proves more obviously useful here than in *Gonorrhœa Virulenta*.

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SECTION XV.

Farther Proofs of the Difference between Gonorrhœa Virulenta and Lues Venerea.

IT was not my intention to enter again on the consideration of this question, as to me it appeared that the difference between the two diseases was completely proved and established; but for the satisfaction of others who may not be so fully convinced of this, I think it right, in a point of such importance, to give a detail of some interesting experiments, which I have lately received with regard to it, and which, if any farther proofs of the opinion which I wish to establish were supposed to be wanting, will probably be considered as sufficient. They ought immediately to have followed the section allotted to this part of the subject; but I

did not receive them till it came to be known that a new edition of the present work was far advanced, so that I was obliged to reserve them for a separate section.

On a subject such as this, the names of those by whom these experiments were conducted cannot be mentioned, but I am personally acquainted with all of them. My friend Dr Duncan I believe saw the progress of some of them. I know that all which they relate may with certainty be relied on, and I give them nearly in their own words.

One of the gentlemen observes, " My experiments were made a good many years ago, and were meant to form the subject of a paper for a medical society of which I am a member. I had no theory to support, nor no other view in making them, than to support the opinion at that time generally received among practitioners, namely, that Lues Venerea and Gonorrhœa Virulenta, are one and the same disease,

ease, arising from the same matter of contagion, acting in a different manner on different surfaces. I was soon, however, convinced, by the very distressful and unexpected event of my experiments, of the fallacy of this opinion.

“ Matter was taken upon the point of a probe, from a chancre on the glans penis, before any application was made to it, and completely introduced into the urethra, expecting thereby to produce Gonorrhœa. For the first eight days, I felt no kind of uneasiness; but about this period, I was attacked with pain in passing water. On dilating the urethra as much as possible, nearly the whole of a large chancre was discovered, and in a few days thereafter a bubo formed in each groin. No discharge took place from the urethra, during the whole course of the disease, but another chancre was soon perceived in the opposite side of the urethra, and red precipitate was applied to it as well as to the other, by means of a probe pre-

viously moistened for the purpose. Mercurial ointment was at the same time rubbed on the outside of each thigh, by which a profuse salivation was excited. The buboes, which, till then, had continued to increase, became stationary, and at last disappeared entirely; the chancres became clean, and by a due continuance of mercury a complete cure at last was obtained."

The next experiment was made with the matter of Gonorrhœa; a portion of which was introduced between the prepuce and glans, and allowed to remain there without being disturbed. In the course of the second day, a slight degree of inflammation was produced, succeeded by a discharge of matter, which in the course of two or three days disappeared.

The same experiment was, by the same gentleman, repeated once and again, after rendering the parts tender to which the matter of Gonorrhœa was applied, but no chancre ever ensued from it.

Two young gentlemen, while prosecuting the study of medicine, became anxious to ascertain the point in question; with which view they resolved on making the following experiments, at a time when neither of them had ever laboured under either Gonorrhœa or Syphilis, and both in these and in the preceding experiments, the matter of infection was taken from patients who had never made use of mercury.

A small dossil of lint soaked in the matter of Gonorrhœa, was by each of them inserted between the prepuce and glans, and allowed to remain on the same spot for the space of twenty-four hours. From this they expected that chancres would be produced; but in the one a very severe degree of inflammation ensued over the whole glans and preputium, giving all the appearances of what is usually termed Gonorrhœa Spuria; a considerable quantity of fœtid matter was discharged from the surface of the inflamed parts, and for
several

several days, he had reason to fear, that an operation would be necessary for the removal of a paraphimosis. By the use of saturnine poultices, however, laxatives, and low diet, the inflammation abated, the discharge ceased, no chancres took place, and he soon got entirely well.

The other gentleman was not so fortunate. The external inflammation, indeed, was slight, but by the matter finding access to the urethra, he on the second day was attacked with a severe degree of Gonorrhœa, which continued for a considerable time to give him a great deal of distress, nor did he for upwards of a year get entirely free of it.

By this he was convinced of the imprudence and hazard of all such experiments; nor could he be prevailed on to carry them farther, although they were keenly prosecuted by his friend; who soon after the inflammation arising from his first experiment was removed, inserted the matter of Gonorrhœa on the point of a lancet

cet beneath the skin of the preputium, and likewise into the substance of the glans; but although this was repeated three different times no chancres ensued. A slight degree of inflammation was excited, but it soon disappeared without any thing being done for it. His last experiment was attended with more serious consequences. The matter of a chancre was inserted on the point of a probe to the depth of a quarter of an inch, or more, in the urethra. No symptom of Gonorrhœa ensued; but in the course of five or six days a painful inflammatory chancre was perceived on the spot to which the matter was applied. To this succeeded a bubo, which ended in suppuration, notwithstanding the immediate application of mercury, and the sore arising from this proved both painful and tedious: Ulcers were at last perceived in the throat, nor was a cure obtained till a very large quantity of mercury was given under a state of close confinement for a period of thirteen weeks.

I have thus been enabled to adduce the most decisive proof that can be wished for, of the difference between the matter of Gonorrhœa and Syphilis, and to shew that while the matter of Syphilis excites chancres, even when applied to the secreting surface of the urethra, and that these again contaminate the constitution, yet that the matter of Gonorrhœa cannot be made to produce chancres, or any symptom of disease in the system.



A P P E N -

A P P E N D I X.

THIS Appendix contains formulæ of injections and other remedies for Gonorrhœa, enumerated in the preceding work.

No. 1. R. Hydrargyr. muriat. mit. vulgo,
Calomel. pp^a. ʒ ii.
Mucilag. gum Arab. ʒ ii. M. et
adde
Aq. rofar. ʒ iv.

No. 2. R. Calomel. pp^a. ʒ ii.
Balsam. copaib. ʒ i.
Vitell. ovi, ʒ ss. M. et adde
paulatim
Aq. rofar. ʒ iv.

No. 3.

No. 3. R. Hydrargyr. purif. ʒ ii.
Mucilag. Arab. ʒ ii. M. S. A.
et adde
Aq. destillat. ʒ iv.

These formulæ of mercurial injections seem to act, as I have elsewhere observed, altogether as astringents. They excite little or no irritation, and when they prove successful, they commonly do so in the space of a day or two. In all of them the mixture requires to be shaken when used; for, even with the assistance of mucilage, the mercury subsides so quickly that scarcely any of it will enter the syringe if this precaution be omitted.

Instead of mucilage, prescribed in No. 3. I have sometimes employed honey. This proves more expeditious for extinguishing the mercury, but the injection prepared with it excites more pain. Whether mucilage or honey be employed the mercury should be very completely triturated.



No. 4.

- No. 4. ℞. Lap. calamin. pp^{ta}. ʒ ii.
Balsam. copaib. ʒ i.
Mucilag. Arab. ʒ ii. M. S. A.
et adde
Aq. fontan. ʒ iv.
- No. 5. ℞. Lap. tutiæ, pp^{ta}. ʒ ii.
Mucilag. Arab. ʒ ii. M. et adde
Aq. fontan. ʒ iv.
- No. 6. ℞. Lap. calam. pp^{ta}. ʒ iv.
Camphor. in pauxil. spirit. vin.
rect. solut. ʒ i.
Mucilag. Arab. ʒ iv. M. et adde
Aq. fontan. ℥ vi.
Ut fiat injectio.

In No. 4. the quantity of astringent earth is so small, that it may be well mixed with the liquid at the time of using it, but in Nos. 5, and 6. where there is a greater proportion of earth, after shaking the phial, it should be allowed to subside for the space of a minute before filling the syringe. In this manner the finer particles only of the earth are thrown into the

the urethra; and it commonly proves as effectual as when the whole of it is used.

No. 7. ℞. Alumen. ʒ iſs.

Solve in aq. diſtillat. ʒ vii.

No. 8. ℞. Cortic. quercus, ʒ i.

Coq. in aq. fontan. ʒ xx. ad
ʒ xvi. Colaturæ, adde
Pulv. alumen. ʒ ii.

No. 9. ℞. Gall. quercus contuſ. ʒ i.

Coq. in aq. fontan. ʒ xxx. ad
ʒ xx. Cola, et adde
Pulv. alumen. ʒ iii.

No. 10. ℞. Kin. pulv. ʒ ii.

Mucilag. Arab. ʒ i. M. in mor-
tario, et adde
Aq. font. bul. ʒ x.

No. 11. ℞. Kin. pulv. ʒ ii.

Pulv. alumen, ʒ i.
Opii. ʒ ii.
Mucilag. Arab. ʒ i. M. et adde
Aq. fontan. bul. ʒ x.

No. 10.

No. 12. R. Opii, ʒ i. solve in aq. font. ʒ vi.

No. 13. R. Aq. rosar. ʒ vii. fs.

Tinctur. thebaic. ʒ fs. M.

In a great proportion of cases opium dissolved in water answers the purpose ; but in a few instances I have found the spirituous tincture in the proportions here mentioned prove more effectual.

No. 14. R. Balsam. Canadens.

Vel copaib. ʒ iii.

Vitell. ovi, ʒ fs. M. et adde

Aq. rosar. ʒ vi.

When the balsam and yolk of the egg are previously well rubbed together, the water may be mixed with them so completely that no great degree of separation will afterwards take place ; but to prevent any inconvenience which might ensue from the balsam getting to the top of the mixture, it should always be well shaken immediately before the syringe is filled with it.

No. 15. R. Ceruss. 3 ii.

Mucilag. Arab. 3 ii. M. et adde

Aq. fontan. distill. 3 vi.

No. 16. R. Ceruss. acetat. vulgo, Sacch:

faturni. 9 i.

Solve in aq. distill. 3 viii.

No. 17. R. Aq. distill. 3 viii.

Acet. lythargyr. gutt. xxiv. M.

When saccharum faturni, or cerussa acetata, as it is now termed, can be obtained pure, it is perhaps preferable for every purpose to vinegar of lytharge; as being of a more determined strength; but it is frequently so much adulterated that it will not dissolve but in very small quantities, even in distilled water. Some of it indeed is so very insoluble, that an ounce of water will not dissolve above a grain. By the addition of vinegar, this may, it is true, be partly remedied; but vinegar, for many purposes, is not admissible in such quantities as are required for rendering

dering this article soluble. Two, three, or more drops of the vinegar of lytharge may be used in every ounce of injection. Two drops often prove sufficient, but many can bear eight or ten.

The following method of preparing vinegar of lytharge is the best that I have met with. It is not very different from the extract of lead of goulard, but the strength of it is more certain.

R. Lythargyri, ℞ iii.

Acet. distillat. ℞ x. Coq. leni igne
ad ℞ vi.

Cola.

Besides boiling on a slow fire, during which time it should be well stirred with a wooden spatula, the whole should be allowed to cool, and the fæces to subside before straining.

Lead dissolved in this manner is easily mixed with water, and it proves to be a very convenient, as well as a very effectual method of using it.

No. 18. ℞. Zinci vitriolat. vulgo. vitriol.
alb. ʒ ss.

Solve in aq. font. distillat. ʒ xvi.

No. 19. ℞. Zinci. vitriolat. ʒ i.

Solve in aq. distillat. ʒ x, et adde

Acet. lythargyr. gutt. xx. ut

fiat injectio.

In some cases, where these articles have excited pain when used in this manner, they have been rendered perfectly mild by the addition of mucilage of gum Arabic, and in others by camphor. Camphor does not dissolve completely in any watery fluid, but being previously well rubbed with a few drops of spirit of wine, as much of it may be mixed with the water as to render the other articles much less pungent than they otherwise would be. The camphor, however, separates in such quantities as renders it proper to filter the solution before being used.

Although a precipitation necessarily takes place from a mixture of vitriol and
saccharum

faccharum saturni, the following combination of these two articles with opium gives a very useful form of injection.

No. 20. R. Zinci vitriolat.

Ceruss. acetat. a a 3 fs.

Camphor, 3 i.

Opii, 3 ii.

Solv. in aq. fontan. bull. 3 xvi.

Cola.

No. 21. R. Fol. rosar. rub. 3 fs.

Alumen. pur. 3 ii. Infund. in
aq. bull. 3 xvi. Cola, ut fiat
injectio.

No. 22. R. Balsam. copaib.

Vitell. ovi, a a 3 fs. M. et adde

Infus. rosar. rubr. 3 xvi.

No. 23. R. Cap. papaver. alb. 3 iv.

Rad. altheæ incis. 3 i.

Infund. per noctem in aq. bull.

3 ii.

Cola.

G g 3

No. 24.

No. 24. ℞. Hydrargyr. muriat. vulgo, mer-
cur. sublimat. corrosiv. gr. i.
Solve in aq. fontan. ʒ x.

No. 25. ℞. Mercur. sublim. corros. gr. i.
Acet. lythargyr. gutt. xvi.
Aq. fontan. ʒ viii. M. S. A.

No. 26. ℞. Mercur. sublimat. corros. gr. i.
Mucilag. Arab. ʒ ii.
Aq. fontan. ʒ vi. M.

Corrosive sublimate mercury dissolved in water proves to be the most certain, and perhaps in every respect the best form of a stimulating injection. Some have advised a much stronger solution than any of these, even to the extent of a grain of mercury to three or four ounces of water. I suspect, however, that those who recommend it of this strength have never made use of it, at least I have never met with a patient who could bear it. When the mercury is combined with water alone, as in No. 24. one grain to ten ounces proves sufficiently

sufficiently strong; but when mixed with saccharum saturni, with acetum lythargyri, or with mucilage, as in Nos. 25. and 26. a grain may be added to six or eight ounces of water. When mixed with either of the two first of these articles, some part of the mercury precipitates, and is therefore lost, and in the other the mucilage tends evidently to render it less active.

No. 27. ℞. Sal ammon. crud. gr. x.
Solve in aq. font. $\frac{3}{4}$ x.

No. 28. ℞. Aq. fontan. $\frac{3}{4}$ x,
Spirit. sal. aromat. gutt. lx. M.

No. 29. ℞. Aq. fontan. $\frac{3}{4}$ x.
Spirit. corn. cervi gutt. lx. M.

No. 30. ℞. Formul. inject. No. 23. $\frac{3}{4}$ viii,
Lixiv. caustic. gutt. xx. M.

I have frequently found both the volatile and caustic alkali prove useful where

G g 4

other

other injections had failed, but the strength for individuals can scarcely be pointed out. While one is able to bear ten drops to every ounce of water, others cannot bear above three or four: The strength that I have advised in the three preceding formulæ proves to be the best for general use, but patients are more easily affected with variety in the strength of these injections, than of almost any other. The caustic alkali may be used in water alone; but it may be ventured upon in larger quantities, and with more safety, when combined with a mucilaginous infusion.

No. 31. ℞. Ærug. pp^a. gr. viii.
Ol. oliv. opt. ʒiv. M.

No. 32. ℞. Ærug. pp^a. ʒi.
Spirit. corn. cerv. ʒiv.
Digere, et cola.
℞. Solut. supr. parat. gutt. xl.
Aq. distillat. ʒx. M.

Verdigrise

Verdigrise mixed with oil may be used with perfect safety, of the strength mentioned in No. 31. but as injections prepared with oil prove dirty and disagreeable in the application, I commonly prefer the form of the remedy, No. 32.

A much larger proportion of verdigrise is often advised, but when more is employed, it precipitates immediately on being added to the water. Even of this strength the precipitation cannot be prevented entirely but by adding about a half more of the volatile alkali to the filtered solution of the verdigrise. After filtering through paper, if two ounces of volatile alkali are added, no precipitation will take place if distilled water is employed; but in this case, a greater quantity of the solution may be added to the same quantity of water. Instead of forty drops, forty-eight or fifty may be added to ten ounces of water.

No. 33. R. Aq. fontan. $\frac{3}{4}$ x.

Tinctur. cantharid. gutt. xx.
ad xxx. M.

The

The three following are prescriptions for bougies,

No. 34. ℞. Emplast. diachyl. simpl. ℥ iv.
Cer. puriss. ℥ iss.
Ol. oliv. opt. ℥ iii.

No. 35. ℞. Emplast. commun.
Sevi ceti, a a ℥ iv.
Ol. oliv. opt. ℥ fs.
Minii, ℥ fs, M.

No. 36. ℞. Emplast. commun. ℥ vi.
Ceræ flavæ puriss.
Sevi ceti, a a ℥ ii.
Ol. oliv. opt. ℥ i.
Antimon. crud. pp_u. ℥ fs, M.
S. A.

Any of these prescriptions afford a good composition for bougies. They require to be slowly melted, and the different articles to be well mixed together. No. 34. is the simplest, and perhaps the best; the red lead in No. 35. and antimony in No. 36.

No. 36, being added chiefly for the purpose of affording a variety of colour.

No. 37. is a composition for bougies recommended by Mr John Hunter*, and

No. 38. by Mr Sharp†.

No. 37. Take of oil of olives three pints,
Bees wax one pound,
Red lead a pound and a
half. Let them be boiled
together on a slow
fire for six hours.

No. 38. ℞. Diachyl. cum pice burgund. ʒij.

Argent. viv. ʒi.

Antimon. crud. pp^a. ʒss.

The quicksilver to be previously dissolved in balsam of sulphur, or in honey, and added to the plaster when melted in a moderate heat.

Any of these compositions, when boiled to a proper consistence, will answer for the

* See Treatise on the Venereal Disease, p. 137.

† See Critical Inquiry by Samuel Sharp, F. R. S. &c.

the formation of bougies, which is done in the following manner: While the liquid still continues warm, let a piece of fine old linen be dipped in it, taking care with a spatula to cover the whole of it. If the melted liquor be of a proper heat, no more of the plaster will adhere to the linen than is necessary; but as air bubbles are apt to rise and produce inequalities on the surface of the cloth, the spatula made use of should be somewhat warmer than the plaster, and by means of it the whole should be made smooth. The plaster might indeed be spread entirely with the spatula; but this is not only attended with more trouble, but it does not cover the cloth with sufficient equality.

The cloth being sufficiently cold, may be immediately formed into bougies, but the whole should, in the first place, be cut into the number that is meant to be made. The most exact method of doing this is by means of a sharp pointed knife directed by a rule. The pieces should be eleven inches in length for bougies of a full size; but

but they should likewise be kept of all the variety of lengths for strictures of different heights in the urethra.

A variety of directions have been given for the form of bougies. Some advise them to be made nearly of an equal thickness to within an inch of their smallest end, and to taper from that to the point, while a great proportion are made to taper to within an inch or two of the point, and the rest of them are cylindrical. I once thought that this last was the best; but after a long course of experience in this branch of business, I am now convinced, that bougies, which taper equally from one end to the other, are the best, and that this form answers equally well for every variety of size. They are introduced more easily, and with less pain than the others: the linen should therefore be cut in such a manner as to give them this form. When rightly spread, and the linen sufficiently fine, a well shaped bougie will be formed of a slip of about five eighths of an inch broad

broad at its largest end, and somewhat more than three eighths at the smallest end. This forms a bougie of a middle size; for particular purposes they must be much larger, and for others not so large by a great deal.

These slips of linen are now to be rolled up as neatly as possible with the fingers; and in order to give them a smooth polished surface, they should be smartly rolled between a piece of smooth hard timber, and a plate of fine polished marble: This being continued till the whole become smooth and firm, and their points being properly rounded in order to facilitate their introduction, they are in this state to be kept for use.

These directions will convey an idea of the method of preparing bougies, but no surgeon can ever become so expert in forming them as those artists who are daily accustomed to prepare them in large quantities. I must here again observe, however, in addition to what I had occasion to remark, in a former part of this work, that

that bougies, properly prepared with resina elastica, are preferable, in many circumstances, to those that are made with plaster. They not only prove much more durable, but more force can be employed with them, and as they are not apt to break or crack by remaining in the urethra, they are used with less pain and inconvenience than any other bougie that has yet been invented.

Cat-gut has frequently been used as a bougie; but after various trials being made with it, I do not find that it answers the purpose: It cannot be made sufficiently smooth, and it sometimes swells so much as to excite a good deal of irritation; and lead, which was one of the first articles used for bougies, is so firm that it always creates much pain, while at the same time it is so apt to break, that different instances having occurred of it in the urethra, it has now been long laid aside.

The six following prescriptions are meant for the removal of warts and other excrescences,

excrescences, and they answer equally well whether the excrescences proceed from Gonorrhœa or Lues Venerea. It would appear, however, that there is a material difference between the warts which occur as a consequence of these diseases, and such as we usually meet with from other causes; for while the former are for the most part easily removed by any of these applications, even with pulvis sabinæ alone, the latter are seldom acted upon by any of them, if it be not by the strong solution of corrosive sublimate in No. 40. and of mercury and spirit of nitre, No. 41. both of which are possessed of a strong degree of causticity.

No. 39. R. Sal ammon. crud. $\frac{3}{4}$ i.

Solve in acet. distillat. $\frac{3}{4}$ ii.

Aq. fontan. $\frac{3}{4}$ iv.

No. 40. R. Hydrargyr. muriat. vulgo,

merc. sublim. corros.

Sal ammon. crud. a a. $\frac{3}{4}$ ss.

Solve in aq. fontan. $\frac{3}{4}$ iv.

No. 41.

- No. 41. R. Argent. viv. $\frac{3}{4}$ i.
Solve in spirit. nitr. fort. $\frac{3}{4}$ ii.
- No. 42. R. Pulv. fol. fabin.
Calomel. a a. $\frac{3}{4}$ i. M.
- No. 43. R. Pulv. fol. fabin.
Mercur. sublim. corros. a a. $\frac{3}{4}$ iii.
Mercur. precip. rub. $\frac{3}{4}$ i. M.
- No. 44. R. Alumen. ust.
Mercur. precip. rub. a a. $\frac{3}{4}$ i. M.

The following form of decoction of sarsaparilla and mezereon is of a strength which most people can bear: when a greater proportion of mezereon is added, it excites sickness, and a very disagreeable sensation in the throat. I mention this decoction here, as in different instances I have had occasion to speak of it; and I shall also have cause to refer to it when treating of Lues Venerea.

No. 45. R. Rad. farsæ, ʒ ii.

Cortic. radic. mezer. ʒ iſs.

Coq. in aq. font. ℞ iii. ad ℥ ii.

Colaturæ, adde

Syrup. altheæ, ʒ i.

The following is the Decoctum Lusitanicum, or Lisbon diet-drink.

No. 46. R. Rad. farsaparil.

Santall alb.

rubr. a a. ʒ iii.

Rad. glycyrrhiz.

Mezerei, a a. ʒ ſs.

Ligni rhodii,

Guajaci,

Sassafras, a a. ʒ i.

Antimon. crud. ʒ ii. Misce, et infunde in aquæ fontanæ bullientis. ℞ x. per horas xxiv. dein, coque ad ℥v. Colaturæ, capiat a ℥iſs. ad ℥iv. quotidie.

Vel

Vel R. Rad. sarsaparillæ,
Ligni sassafras,
Santal. rubri,
Guajaci, a a ʒ iii.
Cortic. rad. mezer. ʒ i.
Semin. corriand. ʒ vi.
Coq. in aq. fontan. lb xx. ad lb x.
Sumat lbs. ter quaterve indies.

Unguentum e calce zinci.

No. 47. R. Olei olivarum opt. ʒ iii.
Ceræ albæ,
Sevi ceti, a a. ʒ iii.
Leni calore liquiesc. dein adde
florum zinci ʒ fs.

Unguentum e lapide calaminare.

No. 48. R. Olei oliv. opt. ʒ iii.
Ceræ albæ, ʒ ifs.
Sevi ceti, ʒ fs.
Lapid. calamin. pp^{tt}. ʒ v. M.
S. A.

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